YACHTING

VOLUME XL
NUMBER I

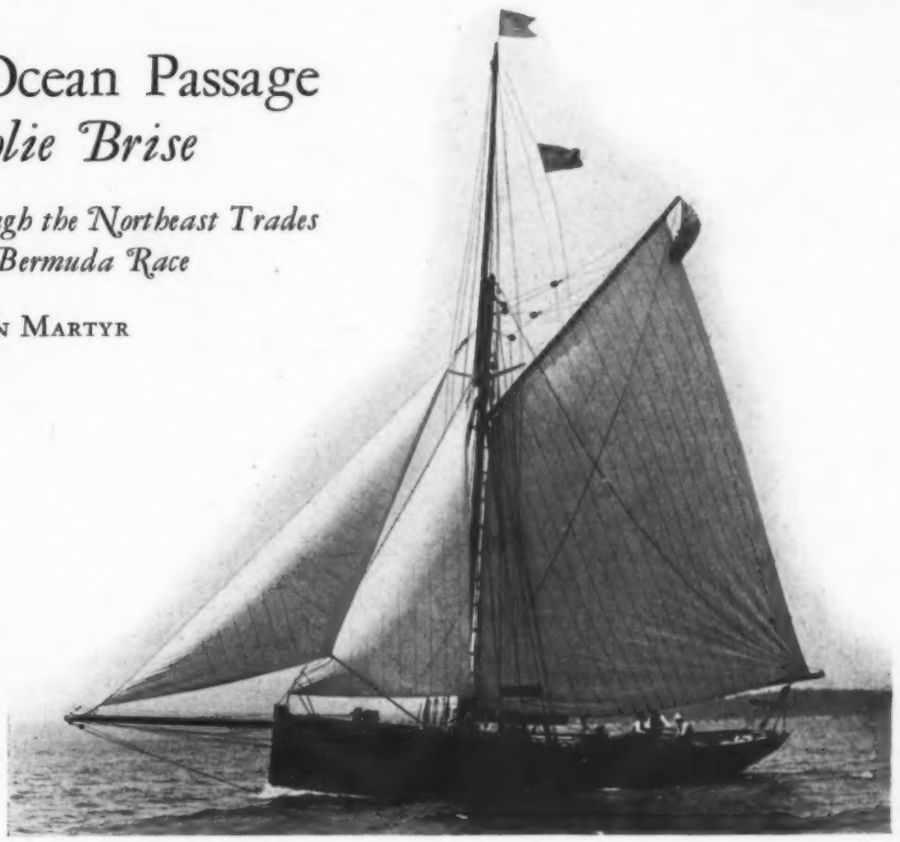
JULY, 1926

35 Cents a Copy
$4.00 a Year

A Western Ocean Passage in the *Jolie Brise*

A 5,000-mile Run Through the Northeast Trades to Sail in the Bermuda Race

By WESTON MARTYR



Jolie Brise, **owned by Lieut. Commander E. G. Martin, which crossed the Atlantic this spring to enter the Bermuda Race. She was built for a Havre pilot cutter.**

TWENTY-FIVE years is a long time to wait; but I had to wait all that while, and more, before a dream I had long treasured came true. But it was worth waiting for.

My dream was to make, some day, a long, lazy passage across the oceans under sail. I did not care very much which ocean I sailed across, or in what sort of a ship, but I *hoped* the gods would set me afloat in a little vessel and let me run her to the westward through those pleasant latitudes where the northeast trade winds blow.

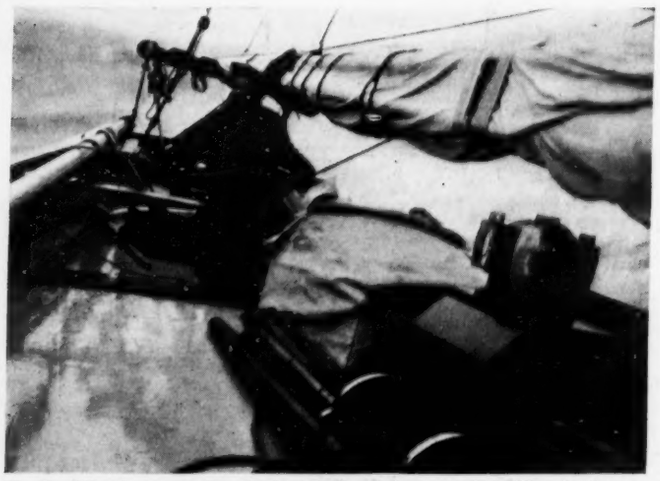
And now the miracle has happened. I *have* sailed, for 48 days on end, across 5,000 salty miles — and I found the reality more perfect than the dream. As I realize I have been greatly favored by the gods, I desire to pay for my luck; and I think the best way I can do this is to try and tell you others (you who dream, too, but who have not yet got beyond the dreaming) how it feels when at last the dream does become reality.

First for the bald, bare figures and facts. I have to get them in, I suppose, to give my story some foundation; but all the same I hate them, because I know that, though accurate, they — like photographs — do not tell the whole truth. To tell you that the *Jolie Brise* is a straight-stemmed cutter, 48 feet l.w.l., 56 feet, 3 inches o.a., 15 feet, 9 inches beam, 10 feet, 2 inches draft, 55 tons displacement, and so on, is all very well; but what I want you to see is not just so much wood and iron and canvas, but the living, all but human ship which carried me and my shipmates so cleverly across the waste of waters which separates my land from yours.

But here are the figures and the facts, as strict and stark as I can make them. I will be done with them as soon as possible.

The *Jolie Brise* was launched in France, in December, 1913. She is a Havre pilot cutter and her designer and builder is Monsieur Paumelle, a man to whom the pilots have been going for their cutters for the past 50 years, so that it seems safe to assume without argument that he knows his job. The Havre pilots were forced by their vocation to live aboard their boats at sea for long intervals, and the qualities they demanded of their craft were seaworthiness, comfort, speed and durability. The type has been slowly and painstakingly developed for many years and the *Jolie Brise* is the highest development of it. She is her designer's last creation and his favorite. No more boats will ever be built like her because the pilots now have to do their work in steam.

The *Jolie Brise* has a straight stem, a long straight keel with a sharply raked sternpost. To my eyes she seems rather full forward, but that fullness is deceiving and I cannot find it when the boat is hauled out on the ways. I think her greatest beam is forward of amidships, but from this point aft she fines away underwater in the most graceful way imaginable. Forward she has 7 feet, 6 inches freeboard, including her two-foot bulwark, and her minimum freeboard is 4 feet. Her mast is stepped rather farther forward than is the practice with English craft of her kind. The lower-mast is 33 foot, 9 inches from deck to hounds, with a 31 foot, 6 inches topmast above it. Her bowsprit is 17 feet outboard and she carries 2,400



E. G. Martin, captain of the *Jolie Brise*, at the tiller in heavy weather.

feet of sail in her working canvas. She is built throughout of oak, with elm garboards and has 2½ tons of iron on her keel and 18 tons inside.

She is, I think, the most perfect seaboat in the world. There *cannot* be a better one. She is dry under all conditions, stands up on her feet and looks the wind in the eye, and she is never by any chance violent in her motion. During our passage from Falmouth to Montauk we encountered three gales of wind, and the blow we met off Hatteras in the middle of the Gulf Stream was a wicked one. Our ship rode out the gales under reefed trysail and storm jib, and in each case I turned in during my watch below and went to sleep. When I awoke I remember lying in my bunk for a while, trying to make out what the weather was doing outside. In the cabin all was peace and quiet and it seemed to me that we were sailing along easily over a gently heaving sea. But when I opened the companion hatch and looked around, the wildness of the scene appalled me. But our good boat was quite at home even in the turmoil of sea. So, seeing she had the situation comfortably in hand, I would go below again — and shave, or eat soup without holding on to my plate, or do something equally unheard of aboard a small boat in a gale of wind at sea. I think the *Jolie Brise* enjoyed our gales.

We sailed from *Falmouth*, coast of Cornwall, on the evening of April 3rd, five of us and the *Jolie Brise*. The idea was to sail direct to New York by way of the north-east trades, and then, if we got across safely, to enter for the Bermuda race and find out how the old-fashioned, straight-stemmed cutter would fare in competition with a fleet of modern schooners in a long race on the open sea. From Bermuda we hoped to race some of your schooners to Cowes and meet these vessels again in our own ocean race 'round the Fastnet. Perhaps ten people in the world knew where we were going. Even the port authorities who cleared us did not know, for we took advantage of an ancient law which still allows a mariner on private business bent to take out a clearance for "Beyond the Seas."

Anyone who might be suspicious was given to understand that we were bound for Spain. Five days later we did sight Spain; but we did not stop there. We sailed on and on, seeing only the ghost of Palma in the Canaries, until on the morning of the 20th of May, Montauk Point rose up out of the sea ahead of us. Personally I was very glad to see it; because after 46 days of sea and sky and nothing else, one begins to wonder if there is *really* any land left in the world. Also, we had run out of sugar, and life for me is not worth living unless I can put four big lumps of sugar in my tea.

To go on with those figures: In 47 days we sailed 5,525 miles by log and made good 5,083 miles, which (as far as I can gather) is the longest continuous passage ever made by a small craft. I do not quite know why we did not stop anywhere on our way. My friend Martin, who owns and commands the *Jolie Brise*, is fonder of the sea than of the land, I think. At any rate, Spain beckoned to him but he would have none of her; Madeira called but he would not hear; Palma whispered vainly of oranges and long, quiet nights of peaceful sleep; while even Bermuda's numberless enchantments were powerless to lure him. So we sailed straight on to our chosen harbor at Larchmont, and anchored there, at the edge of a charming evening, just seven weeks out from home.

The track chart shows the route we took, and I have been asked a number of times why we went such a long way round to get here. We chose the southern route, which the old square riggers used, chiefly because we came out for a sail and, while we were about it, we thought we might as well have a real sail. Also, we were by no means looking for trouble, and although the northern, or direct route, is shorter, its 3,000 miles are crammed full of trouble, if you are coming to the westward. Up there you are certain to be afflicted with numerous gales, to say nothing of fog and wet and cold and contrary winds. We wanted sun and warmth, fair winds and a smooth sea, so we steered south to find them. And at sea the long way round is generally the quickest — for sailing ships, that is, and especially for little ships like ours. So, instead of battling against the westerly winds of the North Atlantic, we sailed south, and we picked up the trades about 300 miles north of Madeira. From Falmouth to the trades we averaged 100 miles a day and suffered from two gales and much cold and wetness. But from then on, until we lost the trades to the southward of Bermuda, we ran dead before

A French tunny fisherman, met in the Bay of Biscay.

the wind under squaresail and raffee for 3,500 miles at a speed of 150 miles a day — and every day was a day of fine, fair weather. We went down to about 19° N., which is a very long way south and well inside the tropics; but it paid, for we got right into the heart of the trades and found a splendid wind there for passage making.

I strongly advise any yachtsman who may be taking his boat across the Atlantic from east to west to first sail south, well into the trades, before making any westing. And, as the American coast is approached, do not

Running the trades under squaresail and raffee, with an awning rigged over the helmsman.

Setting up the main shrouds on the passage.

For nearly 3,500 miles the squaresail was carried as the ship made her westing before the N.E. trades.

be in too great a hurry to make northing. Keep well in the trades and pass to the southward of Bermuda. Draw a little milestone on the chart at 65 W. and 25 N. and make up your mind to pass it to starboard. If you take this southern route, *be sure* to go well south. Go south of Lat. 20, for the N.E. trade is a poor thing anywhere near its northern limit, which is a place of squalls and baffling airs and calms, an area most carefully to be avoided. We ourselves turned north, I think, a little too soon — and suffered accordingly. Once north of the trades our troubles began, and our constant desire then was to work at all costs to the westward. For some days we were forced to the east of north, and when we did at last make a little westing we had to fight for every inch of it. It took us nine days to battle from 62 W. to 67 W., although in that time we made 600 miles of northing, and we might have made those 5 degrees most comfortably in the trades in two days if we had not been so anxious to get our bowsprit pointed towards Montauk.

Our voyage began, in reality, two months before we sailed. During all that time Martin, and Briggs, his skipper, were both hard at work. Briggs was on board preparing, under Martin's direction, the boat for sea. Martin was — well, I saw a little of his work at this stage and the amount he had to do was appalling. It is almost incredible what a number of things have to be done before a little ship and five men can start on a long voyage with any hope of accomplishing the passage in reasonable safety and comfort. The details in connection with stores and food alone are enough to drive a strong man crazy. And there must be no mistakes, because a little mistake in this game is quite likely to cause trouble. I do not know all Martin did because no man but himself knows that. One example, therefore, must suffice. Take the matter of fresh water. First there was the difficult question to answer: How much to allow per man per day? The figure of one gallon was eventually decided on, which meant 5 gallons per day. So far so good — it was a simple sum. But then it came to the days. How many — 40? 50? 60? If anything went wrong it might be 100 — or more. The thing was a mere guess — but the guess had to be right. Martin finally decided to carry 440 gallons of fresh water; but as the ship could take only 220 gallons in her two permanent tanks it became necessary to make arrangements for carrying the rest. The balance weighed one ton, and the safe carriage of one ton of water takes a good deal of arranging for if you wish to carry it inside a small ship. In our case it meant a big tank under the cabin table. This sounds simple, but it is not. The shape of the tank was governed by the size of the ship's largest deck opening — and incidentally meant a new table. Further, one cannot leave a ton of water in an iron tank lying about loose on the floor. It has to be fixed so that *nothing* can move; because if it shifts in a seaway the ship may not be heard of again. Aside from piping, pumps, baffle plates and a few more such matters, I think I have told you of most of the things which the skipper had to think out, arrange for, see made and installed in connection with this one question of water.

I rather that this water business was one of Martin's simplest jobs. What food to take? Where to stow it? How to keep it in good condition? These were three more little problems which he had to solve. As an illustration of his methods I can say that we enjoyed *fresh* butter for the whole of the voyage, and, although we had to throw 150 lbs. of beef overboard, we did not miss it.

Besides all this (and everything else) Martin had to learn to play on the radio and also to design two new and alternative rigs for the ship. She had her racing rig all complete; but owing to the nature of our voyage it was necessary to be able to convert her at will into either a heavy weather fore-and-aft cruiser or a one-masted square rigged "ship." Our two additional rigs are both original in design, especially the square rig; but during the whole of our long passage they did the different kinds of work which they were designed to do, and without a single hitch. The trysail rig brought us safely down past the boisterous "Forties" and carried us through three gales. Our square rig's share was the 3,500-mile run through the trades; and we used the racing rig to coax the boat across the Horse Latitudes, that tantalizing area of squalls, calms and light, fickle airs. And, to give it its share in the run, we set our suit of working canvas to take us in from the Stream to Montauk Point. We had on board 19 sails in all, 12 being ordinary sails and 7 special sails for the ocean rig.

I mention these matters because, while we have received many congratulations on the successful completion of a long passage, yet I feel it is not sufficiently understood that it was all the hard work which was done before the voyage commenced that made success — or even the voyage itself — possible. I cannot too strongly emphasize the fact that in making a voyage like ours it is the *preparation* that matters. If this has been properly done the rest of the business is comparatively simple.

When we left Falmouth I think the ship, in her equipment, was almost perfect. We had everything aboard, and everything was the best of its kind. Outside, we were freshly painted and the bottom was covered with two new coats of a bronze anti-fouling composition which Martin knows and favors. All gear aloft was as sound as a bell and, through the full range, from our silken spinnaker to our No. 00 sea anchors, we had enough canvas on board to do the boat full justice whether we raced her in light weather on Long Island Sound or nursed her through the center of a hurricane. Besides our 19 sails and two sea anchors the number of spars we carried lashed on deck was five. On deck was the dinghy also and a number of other things; but, thanks to the boat's flush deck and her great beam, there was plenty of deck room left.

Below, everything was comfortable, because the *Jolie Brise's* inside is so vast and so well arranged that there always seems to be a place for everything. She has a large bo's'un's locker in the eyes of her in which most of her light gear may be stowed. Aft of this is the galley and fo'c'sle, with large transoms along each side, two pipe perths, a coal stove, an oil stove and a large Primus in gimbals. There is ample locker space, and under the floor are bins, for coal, coke, oil, paint and so on, and the chain locker. The *Jolie Brise's* fo'c'sle is airy and light and very comfortable, and indeed, in cold, rough weather, I think it is one of the best places in the ship.

A short passage leads from the fo'c'sle to the cabin and on the starboard side of this is the toilet. The cabin is an immense place. In the middle of it is a table 7 by 5 feet, beneath which is the one-ton water tank; but such is the scale of things that we have to point out this tank to visitors. On each side of the cabin are two big built-in berths with drawers beneath them, and then come two wide transoms, about 14 feet long, with great lockers below. At each end of the cabin are more lockers and shelves, and into these places we stowed easily our food for three months and all our personal gear. It has pleased Martin to leave the cabin arrangements exactly as the pilots originally made them; and it seems to me that those French pilots understood perfectly what comfort meant at sea. I can personally vouch for the fact that they most adequately secured it at any rate. The cabin is a light, dry, cheerful, pleasant room at all times and one can go down into it in the middle of a hard gale — and forget about the wind.

Abaft the cabin a passage runs to the companion, and on the starboard side is Martin's berth. Martin is a very large person and his berth is 8 feet, 6 inches long and had to be specially built for him so that he could lie down without folding. On the port side is a huge chart table, the long and short distance radio sets, by means of which we obtained the time signals continuously throughout the voyage, and racks for charts and bookshelves; while abaft of everything is a great space fitted with racks wherein are stowed our sails and gear.

In the matter of pumps, I do not know why we troubled to carry any. Briggs poured four buckets of water into the bilge before we started, "To keep them sweet," he said. Since then I have watched him sponge out three buckets full and the bilge is as dry as a bone. It seems, therefore, that this ship leaks *outwards*. In spite of this we installed for the voyage an enormous deep-sea affair with which it is possible to pump out "several tons per minute." This was put in "in case we hit something."

Food is a thing which always interests me, and on a voyage like ours I think the food question becomes all-important. Before we started I looked through every book on long cruises that I could get hold of for some hint as to what food and how much of it we ought to take; but not one of these contained a single helpful word. It seems strange that every man who has ever made an ocean passage and written about it afterwards should most carefully shun all mention of the food he eats, or of the food he wished he could have eaten had he only thought of getting it before he sailed. It seems it must be vulgar to write about food. Well, I am going to risk it, for I feel that those who may wish to play this ocean cruising game, and who read this story, will be much more grateful if I can help them to be well nourished, rather than refined.

On the *Jolie Brise* we were out of touch with the markets for seven weeks; but during that time we invariably sat down to four big meals each day — and three of these were hot ones. We needed them. We worked hard, so we had to eat a great deal. And I think, maybe, that is one reason why we all enjoyed our cruise so much. We had breakfast at 7.30, of bacon and eggs usually, or sometimes curry and rice or sausages and fried potatoes, with all the usual trimmings of new bread, fresh butter and marmalade and milk — but the milk came out of a tin. And if anyone fancied fish we opened a tin of sardines, that is, if no flying fish had come aboard during the night. At noon we had lunch, and we found it best to make this the biggest meal of the day. The fresh meat we took aboard at Falmouth lasted us nearly a week, and after that we fell back on salt beef, which we boiled with potatoes, onions, turnips, carrots and dumplings. When the salt beef went bad in the tropics we hove it overboard and ate canned meats instead, and enjoyed them. Tea was at 4 o'clock and it was a royal meal, for Green, our cook, baked scones and rolls and rock-cakes which went well with butter and jam. One day Briggs tried his hand at rock-cakes. He made 80 of them — and they were so good we ate them in two days. At 7.30 we had our evening meal which had to be good and solid to carry us through the night, so that it was generally a collection of everything we had in the ship, with a sea-pie, a brown hash or a stew as a good foundation to build on.

On Sundays we invariably had pea soup and duff in the approved deep-sea style, and when we came off watch at night there was always something hot to drink, with biscuits and cheese, or a cup of Bovril. Green did wonders. He gave us our hot meals each day, even when he was sea-sick. He kept things neat and clean below and continued dauntlessly to bake his bread and cakes through the heat of the tropics and throughout our gales of wind.

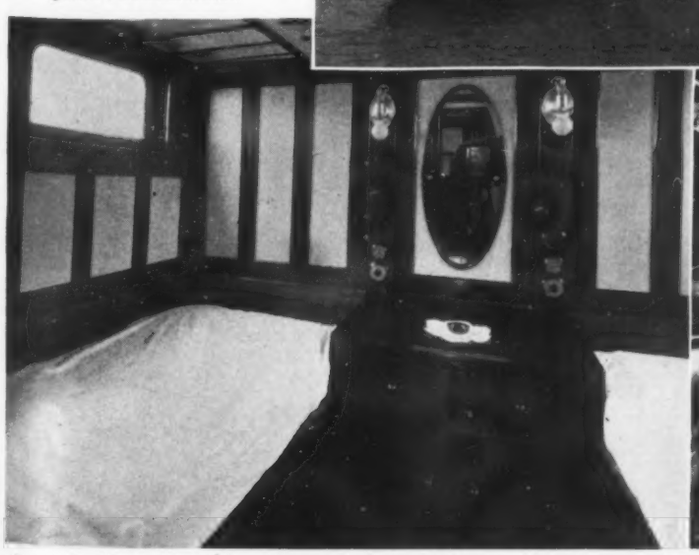
We sailed with a large sack of green vegetables stowed in the dinghy, and these lasted us 10 days. They would have lasted longer if we had taken more care of them, but they got wet with spray in our second blow and then the sun got at them. About dawn on April 14th Warneford, our navigator, stated that he could plainly smell the land, and as the nearest land should have been Africa and some 500 miles distant, we went on deck to see about it. There certainly was a very distinct scent of rotting vegetation in the air. But it was not Africa; it was our sack of greens, and we had to jettison them.

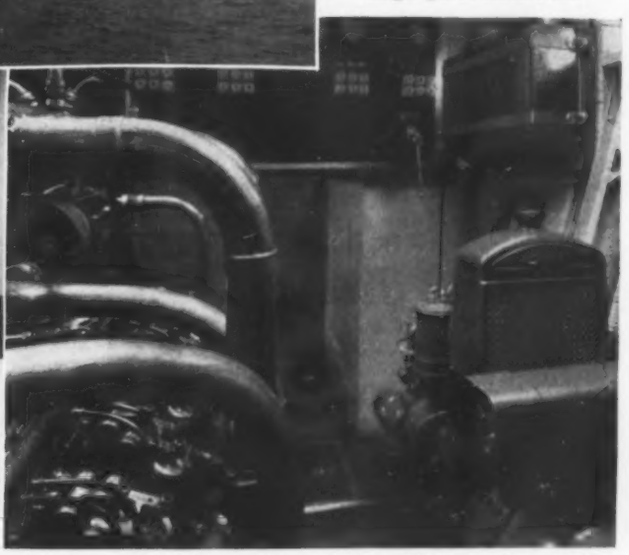
(*Continued on page 90*)

Charming Polly, A Most Attractive High Stepper

Charming Polly is a new 76-foot express cruiser owned by Col. H. H. Rogers. In her recent trials on Long Island Sound she made some 34 miles per hour. She is of light but strong construction, with a special framework of corrosion-proof duraluminum.

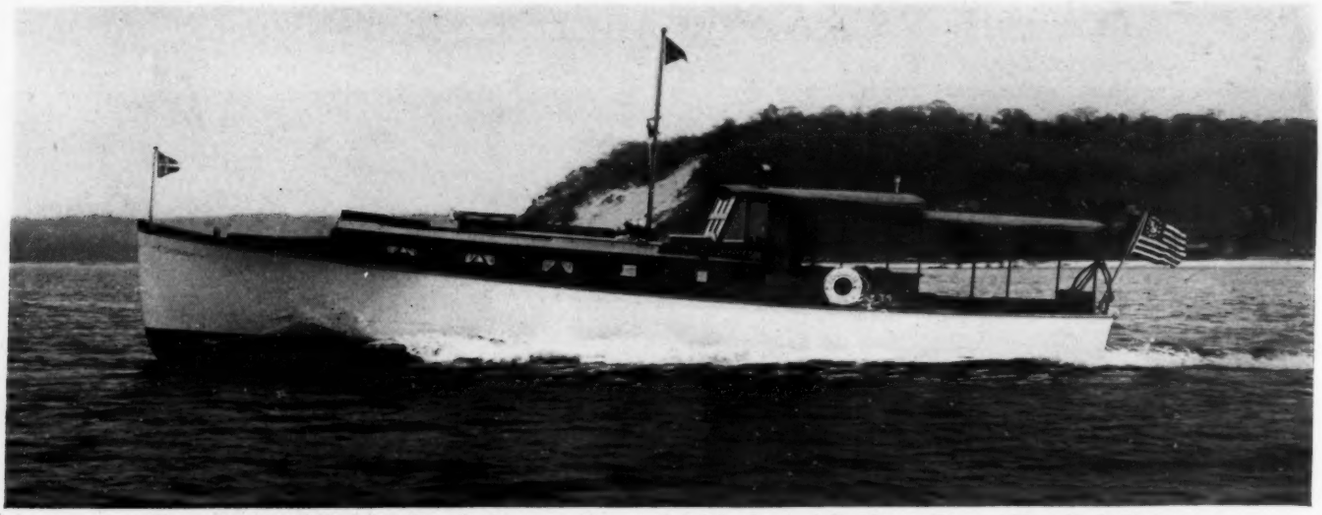
The deckhouse living room of the *Charming Polly*. Comfort with maximum speed and safety were the chief requirements of Col. Rogers. These have been obtained, and the cabin layout shows an owner's stateroom and a double and a single guest stateroom.





A speed of 33 miles per hour was stipulated. This speed has been exceeded by three Maybach-Zeppelin 12-cylinder V-type motors of 450 h.p. each, turning at 1,400 r.p.m., the fuel consumption being but .42 to .48 lbs. per horse power hour. Electricity for lighting is furnished by a Kohler generating set.

Coquette, an Attractive New Day Cruiser



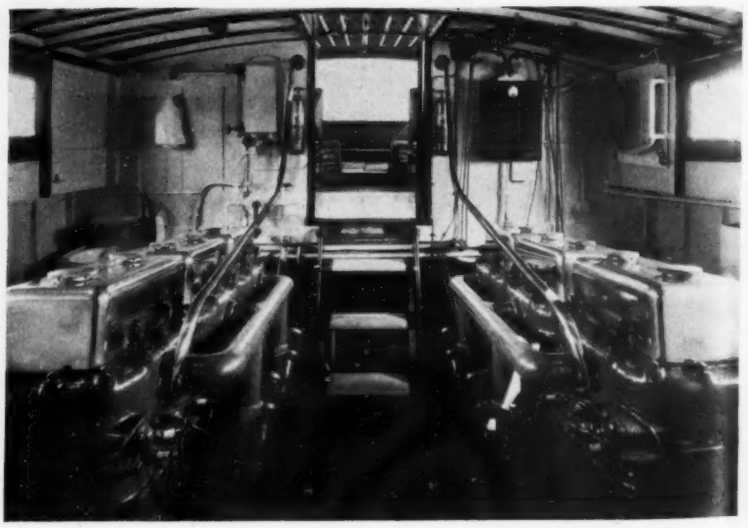
Coquette **is a 48-foot fast Day Cruiser recently completed for Louis deB. Moore, Esq., of New York City.**

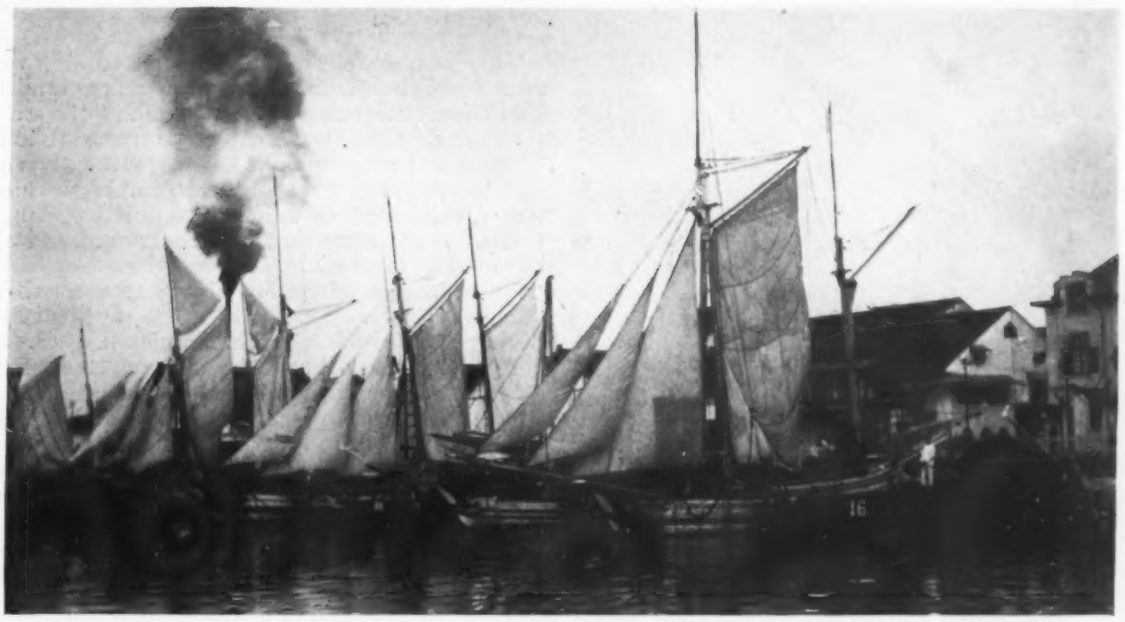
Coquette is one of the new Day Cruisers developed by the Consolidated Shipbuilding Co., of Morris Heights. She is 48 feet in length, 10 feet 6 inches beam and 2 feet 9 inches draft. With two 180 h.p. Speedway engines she develops a speed of 25 miles per hour. The accommodations are excellent for a craft of this size, with a roomy main cabin, a bridge deck and forward and after cockpits. ***Coquette*** will be used on the Sound and along the coast, with headquarters at Oyster Bay.

Left. Interior of main cabin, looking forward.

Bottom, Right. The two Speedway motors.

Left. The steering wheel and controls on the bridge deck.





Types of native craft in the small-boat anchorage at Makassar. Note tripod masts, low bows and high poops.

Escapades of the *Eleanor*

A South Sea Cruise in a Fifty-five Foot Yawl

By WARWICK MILLER TOMPKINS

IT has always been my contention that, inasmuch as the *Eleanor* was conceived in a Chinese brain and built by Chinese from Chinese materials, the Skipper should have treated her as a Chinese ship expects to be treated. Did he imagine that simply because he now owned the boat that the pursuing marine devils which hover over the wake of all ships were exorcised? Every Chinese sailor I talked to concerning the *Eleanor's* escapades decried the notion. Now more than ever, they held, there was need that we emulate the Chinese and dart across the bows of any ship we could find in the hope that the fiends astern would come to grief on the same cutwater we had narrowly missed a second before. It followed that we should cut such capers about the bows of the biggest and fastest ships we could find. The bigger and faster the better. Just think of the discomfort and annoyance accruing to a vengeful ship-devil if he, just a fathom astern of a vessel, is crashed by the forefoot of a 30-knot destroyer! It makes me weep to think how many glorious opportunities to annihilate those jinxes of ours we of the *Eleanor* missed.

A year before I ever saw or heard of the *Eleanor*, Tom Aitken, one-time Manila attorney, had bought the yawl in Hongkong. There, for a ridiculously low price, compared to American standards, he had gotten this 55-foot over all cruiser. Forward — let us delve into these vital statistics and get them over with — she drew three and a half feet of water, aft a little over six. Everything about her promised that she would be as good as she was slow, and that was considerable. Her bows followed the Chinese ideal of bluffness, and their great bouyancy combined with a beam of 14 feet 6 inches promised she'd behave like a proper cork in dirty weather. Even in my fondest moments, and there were times when I was very fond of her, I never considered her a thing of grace and beauty. In addition to great corpulency there was about her a too lengthy bowsprit, a too lofty mainmast for a gaff-rigged boat, and outside iron chain plates that no amount of chipping and red-leading would prevent rusting.

There were too many deck openings. Right abaft the capstan was a manhole into the fo'c's'le, and then came the big engine room hatch. The main cabin trunk, 22 feet long and 30 inches high, had a hatchway forward, a skylight, and the main companionway aft. The binnacle stood on a hatch cover over the lazarette. All these openings mitigated seriously against our chances of keeping dry and comfortable in wet weather, and, as a matter of fact, we didn't. The cabin could be made almost as open as the deck by virtue of many ports, each of which was fitted into a wooden panel that, by lifting up out of a groove and then pulling inboard, could be swung up and fastened to the overhead. Some variation of this scheme which would make such ports water-tight would indeed be a blessing to the tropic cruiser who often finds a moving breath of air below worth almost any cost. As our panels were arranged there were no gaskets in the joints and no way of positively battening them down. They were kept in place by their weight only.

The snug, dry little fo'c's'le was right in the bows. The next compartment housed a six-cylinder engine that had given up the ghost and was always just so much ballast in the *Eleanor*. Opposite the engineer's bunk was the efficient little Delco lighting plant and a 250-gallon water tank which was supplemented by two 25-gallon tanks, one in the lavatory and another in the galley. The galley stove — curses on it! — was an oil burning contraption that gave no end of trouble.

The main cabin was splendidly roomy, its 16 feet 8 inches of length being unbroken by bulkheads. Lockers on the starboard side held food, guns, and navigation instruments, while the bunks were to port. Along both sides ran a staunch hand-rail that was worth its weight in gold

The crew of *Eleanor*. Left to right, MacGregor, W. M. Tompkins, T. D. Aitken and Jack Witter.

in dirty weather when handholds were more important than footholds. You who read this take my advice and never go to sea without rigging up a rail on which half a dozen huskies can hang their entire weight when she's rolling her rails under.

Under the deck aft was the lazarette in which were stored extra sails, food, paints, etc. The chart locker, a wide, deep drawer, ran back into this region. It was beautifully out of the way and kept our many charts smooth and flat, an eminently desirable state for charts as anyone knows who has ever wrestled with a rolled, large scale chart while looking for the ever missing corner weights.

The yacht steered with a quadrant and wheel. Half-inch wire shrouds, three of 'em, stayed the mainmast, helped out by two preventer stays to each side. A 12-foot dinghy was carried on old fashioned davits in good weather, or lashed on the deckhouse when it got dirty.

Now, with all this off our chests, we can go on to see what befell the *Eleanor* when her Skipper sailed her out of threatening Lye Mun Passage and headed for Manila, while he virtually thumbed his nose at the ship devils.

It took him three weeks and three attempts to get away from Hongkong. Each time he started he was forced back by a mysterious leak that was too big for comfort. It was finally located; a quarter-inch bolt had been put in a three-quarter inch hole considerably above the water line. It happened that each time she left Hongkong the yacht had gone on the port tack before a good norther and, heeling, had buried the fault under the green, which forthwith proceeded to come inboard.

But finally, after weathering successfully one of the frequent typhoons that so thoroughly discourages deep-sea cruising on the China Sea, the bluff little vessel made Manila, took on stores, and started on her 15,000 mile cruise to San Francisco by way of the East Indies and the principal South Sea archipelagoes.

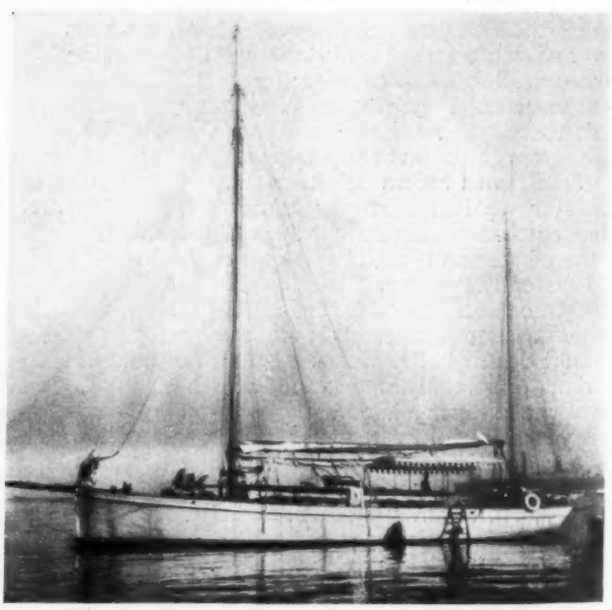
Three months later, in the Gulf of Davao, Mindanao, a faulty link in a brand new anchor chain parted and the *Eleanor* drove ashore on a cobble beach. Aitken and his three companions, aided by 50 head-hunters from the savage, jungle-clad mountains, salvaged every moveable thing aboard, sending it ashore, piece by piece, on the heads of their naked helpers who waded in and out through a bad surf times without number. Then Aitken passed a line high about the mainmast and fastened it to a tree to prevent, as far as possible, the cruel grinding action of the shingle. They waited for the weather to subside while for three days the wrecked yacht took a terrific pounding, her bell tolling sadly with the shock of every sea.

Then, a crude slip built, the battered ship was hauled up on the hard, the savages manning crude Spanish windlasses and the anchor chains taking the strain. From the engine room to the after cabin bulkhead she was gone. There were but two planks left below the covering board. Aitken, puzzling over the problem of working at his wreck, conceived the unique idea of suspending her from timbers stuck right through her forward and aft. While he cut the necessary holes in her sides his primeval allies paddled to a plantation 30 miles away where they secured four heavy jacks. By the time they returned Aitken had his hardwood timbers cut and in place. A jack was put on each bow and each quarter, and the staunch little *Eleanor* was lifted clear of the ground. Her back did not break, contrary to expectations, and Aitken at once set to work on what appeared a hopeless repair job.

Consider the difficulties he worked under. The nearest town of any sort, Davao, was 75 miles away along a deserted coast. Manila, where he must get most of his materials, was 900 miles to the north. He had but slight knowledge of carpentry and none of the shipwright's trade.

Well, it took nine months of heroic effort, but he finally rose one morning to launch the *Eleanor*. If she had been strong before she was doubly so now. He had cut down 75 hardwood trees — molavy — to get the 31 new, natural-bent ribs he'd put in her with the aid of a Chinese carpenter eventually secured from Manila. Those ribs were none of them less than four inches square; some, those he'd not bothered to trim down, were six by fours. These were placed 11 inches apart and they were in one piece from side to side, not being broken at the keel. On the splendid new keel he'd bolted the salvaged pieces of his old iron shoe. And the stodgy, irregular little steamer that is supposed to run from Manila to Davao on a monthly schedule had ultimately condescended to bring him a beautiful lot of Oregon pine planking that hid the new frames.

The rejuvenated little ship had just taken the Gulf



The *Eleanor* was not a thing of grace and beauty.

waters again when Jack, Ray, and I found her off Davao. Once more she was ready to get underway. Jack, let me explain, an old college friend of mine, had been making a post-graduation tour of the world in a freighter's fo'c's'le when I persuaded him to desert her for the *Eleanor*. Ray,

our well-loved "Wild Irishman," was the adventuring scion of an influential Manila family who wanted to go cruising for the same reason I did — the fun of the thing.

In addition to us the Skipper recruited two fine little Filipinos who'd been begging him to take them along. Jose — who possessed one of the most exquisitely beautiful bodies I've ever seen — was made a deckhand; Constancio sort of gravitated into the galley, and a plucky little cook he made. I will never ask for better shipmates than those two care-free, sunny lads.

Slowly we worked on westward towards Zamboanga, stopping here and there to go after the wild hogs, which we missed with great consistency. The winds were most variable. Sometimes there would be a full dozen squalls visible at once while we lay completely becalmed among them. It was interesting to watch the collision of a couple of these black fellows. Underneath the clouds, with their trailing, train-like mists that dropped to the ocean, the water would be inky black, flecked with the white crests of little waves. Nearer and nearer the gloomy giants would drift; then would come a merging of lofty heads, a swirling of the drooping mist-garments, and a clashing of the cross-waves. Often enough, when the stronger of the two had overcome his rival, the victor would pounce upon us and we would have to douse the mainsail in jig time and pass up oilskins to the man at the wheel.

At Zamboanga, on the western tip of Mohammedan Mindanao, we lay next to the tiny *Dauntless* that the religious fanatic Ira Sparks sailed single-handed from Honolulu to the Philippines. His feat illustrates more than anything else the remarkable steadiness of the trade winds, for he sailed with neither chronometer, sextant, nor chart. He did have a compass, one of those doo-dads worn on watch chains, but he didn't use it. He never touched a halliard or sheet from start to finish of his 90-day cruise — just simply sailed and sailed with the helm lashed until he raised land. An overzealous native constabulary officer

The *Eleanor* on the ways after she was repaired.

relieved him of his shotguns and rifle on the grounds that he had no Philippine license to possess firearms, and Sparks was too wrapped up in his mission to protest at such idiocy effectually. He sailed for Zamboanga — following the coast line because he couldn't navigate — and disappeared from the face of the earth. The *Dauntless*

The *Eleanor*, after she went on the beach in the Gulf of Davao and had her bottom knocked off.

was later found high and dry on the beach, stripped of all her gear. It is believed that he fell afoul of some of the fierce Moro fishermen who have not yet forgotten the deeds of their pirate ancestors, and who emulated them, deserting the little yawl for fear of subsequent identification if they kept her.

Leaving Zamboanga astern after a delightful visit in the loveliest South Sea town I've ever seen, we headed the *Eleanor* westward across the Sulu Sea, saying goodbye once and for all to the well-charted, well-lighted trade routes as we ventured into the "Sea of Currents."

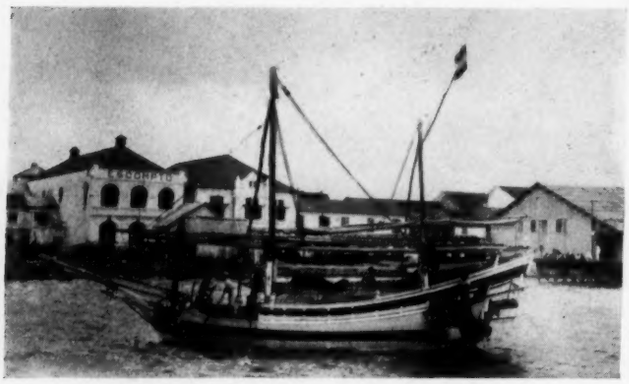
Four days later we won into Jolo, 80 miles from Zambo, after a tussle with variable winds and fractious currents. All of us, when we were not changing tacks or whistling for wind, had been studying. Jack, the Skipper, and I kept at navigation, from which one peek at the "math" tables had scared Ray permanently. Three people with three different positions among 'em would be quite enough, he thought, to prevent things from getting dull aboard. Henceforth he applied himself to whatever mechanical problems he could find. First, he took a ship's clock apart and put it all back together again in a neat little pile. Later he claimed that his invention of a third handle for the lavatory pump would be a great blessing, there being but two anyway that had to be operated simultaneously. But he did make the Victrola work and for that everything shall be forgiven him. Music hath great powers to sooth the calm-bound sailor.

Jolo is fascinating both in its present day, rather dilapidated, aspect and in its historic reminders of old days of pomp and strife. We dallied for a week gossiping with the five lonely Americans stationed there and watching the swift, beautiful vintas gliding in and out of the harbor with their loads of shiny fish and, often, contraband opium. To see a vinta charging along in an "eight-man wind," with the eight men as many bronze statues on the weather outrigger as it lifts clear or smokes through the wave crests, is as stirring a sight as I know. They attain speeds of 18 knots and laugh now at Uncle Sam's revenue cutters as they once did at clumsy Spanish galleons sent to punish them for their misdeeds.

This strange and fearful sea, which the sailing directions hold as one of the most dangerous in the world, saved its worst pranks until we had said farewell to Jolo and turned our faces towards Sandakan, capital of British North Borneo.

A change in the weather was apparent shortly after we took our departure. There was more kick in the fickle little squalls on which we were counting for our mileage. They came up and died more quickly and were frequently strong enough so that reefs were necessary.

At midnight, one Monday night, I took the wheel. There wasn't a breath of air stirring and the darkness



A native prau at Makassar, in the Celebes.

was almost palpable. For an hour nothing happened. Then I became conscious of a low, moaning roar to the north. Swiftly the ominous sound grew until it sounded like a long and heavy freight crossing a trestle.

"Jack!" I called softly to my sleeping watch mate, "Jack! Come up on deck and see what you make out of this!" The big fellow's head appeared out of the scuttle and we listened together to that heavy, sullen growl that, coming from such utter darkness, probably seemed more awe-inspiring than it would have otherwise.

"Look!" His exclamation was not needed to draw my eyes to a line of gleaming white that was racing down on us. The *Eleanor* jumped as it hit. Part of it slopped on deck and she bobbled like a cork in queer jerky movements while the sails boomed hollowly as they swung from one side to the other. Around and around the yacht spun while the chattering waters chuckled and gurgled demoniacally.

It was the famous tidal bore of Tapaan Passage. We were in its grip for two hours, during which we were carried 14 miles from our original position. Then quiet came suddenly as the rip went stamping on to the southward. Our sole consolation during those long hours of utterly helpless gyrations was in the knowledge that the thickest groups of islands were well to the eastward and that there was plenty of water beneath our keel. A bout with one of those currents would be no fun at all in shoal waters.

Tuesday, Wednesday, and Thursday passed. On the last day a calm came with the sunset, and we were left rolling violently in a long, deep swell. The ship complained until we were all on the ragged edge of hysterics and sleep was out of the question. I took the deck long before my watch, and one by one the rest dozed off.

Two bells of the mid-watch. Bam! As suddenly as that a powerful gust jumped at us, and the staysail, filling with a gunlike report, tore out its clew. The gang was on deck in a trice, and in less time than it takes to tell the flapping sail was furled and the yacht was plunging along under jib and jigger while the scuppers gurgled in the foam. The rain came, pelting, driving sheets of it. For half an hour we sprinted along and then, again without any warning, the wind redoubled its force. Down went the *Eleanor*. There was a sharp crack behind me, and I caught a photographic impression of the port life ring, which was carried on the mizzen shrouds, rising like a gray doughnut skyward. Then something hit me a staggering blow on the head and I went down for a short count.

My dizziness was gone by the time the aroused sleepers below gained the deck to find the yawl without a mizzenmast and in the trough of a mounting sea. A dull, phosphorescent glow astern marked mast and sail where they dragged, held by the sheet, an improvised sea-anchor.

With the first light of a cold — and don't think it can't get plenty chilly in latitude 6° North! — dawn we were on deck untangling the mess. When everything but a life ring and an iron belaying pin had been accounted for, the sail, boom, gaff, and halliards salvaged, and the broken stick cast adrift, we set a three-reefed mainsail and the jib and got back on our course. We took some sights and discovered that a current had set us some 30 miles to the eastward in a little over five hours.

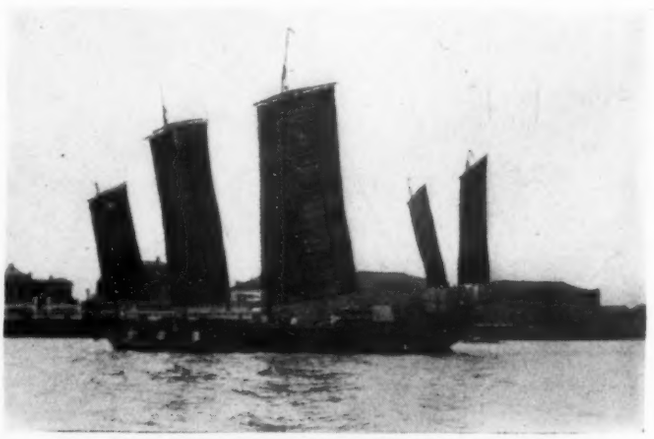
But now the Sulu Sea relented, and we ran on to Sandakan in good shape. The Borneo jungle furnished a fine, hard-wood mizzenmast and this one we stayed with turnbuckles that hung on to the shroud eyes with shackles instead of hooks. The opening of the hooks had cost us the other mizzen and we didn't want to go through that sort of instruction again.

While the yawl was having her bottom painted with anti-fouling mixture a cable put an end to Ray's cruising, and we shipped in his place a young Scot, "Mac," who thought he might make our engine function.

Then, with a glorious fair wind, the *Eleanor* pointed her bowsprit south as we drove for Makassar Straits and Makassar. Two nights out of Sandakan we were scurrying through Sibutu Channel, another famous raceway of the tides, under a full moon that threw into sharp relief a square-rigged, clipper-bowed steamer bound for the Moluccas. She gradually drew away from us, our courses diverging, and shortly afterwards we raised the last Philippine light, the flashing beauty on Saluag Island. I'll never forget the beauty and exhilaration of those hours of running nor will I ever cease to remember most vividly the horrible grinding, grating, and crunching of coral against our iron-shod keel and along the planking as the yacht leapt from the safe, deep blue into the emerald green water that lies over the reefs.

"Wear ship!" the Skipper howled, springing from his bunk on the hatch forward and starting aft on the run while Jack spun the wheel and I bent all my strength to the main sheet. We had been traveling fast, so fast that the main boom was slashing across the deck under a mainsail taken aback when Aitken got aft. The viciously-lashing block came within an inch of cracking his head like an egg as it snapped out to the length of its strop.

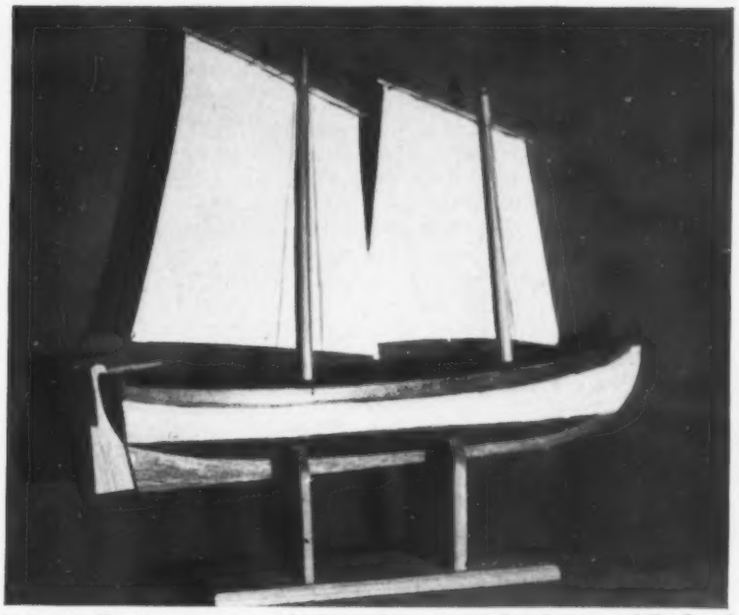
Somehow we scratched off that patch of hungry coral,



One of the large Chinese junks that trade in the Sulu Sea.

ran farther seaward, and resumed our course. Checking our piloting we could find not the slightest error. The almost fatal mistake — it would have been fatal had not the tide been at flood — was on the U. S. chart which we had trusted too implicitly. Where we had touched the chart showed 53 fathoms with nothing less than 47 anywhere inside a circle with a mile radius. Again one lesson was enough. It demonstrated conclusively to us that,

(*Continued on page 80*)



Model of the *Bounty's* launch, cut directly from the builder's draft. The lines are surprisingly modern, except for the powerfully flared bow. A glance at her form shows why she was able, though heavily laden, to make successful runs before heavy winds and high seas.

The Voyage of the *Bounty's* Launch

A Piece of Seamanship and Navigation Unequaled in the Annals of the Sea

By VICTOR SLOCUM

THE story of the mutiny of the *Bounty* is written upon the South Pacific, where the incident was one of the outstanding events of the days of exploration. The act of the mutineers in turning nineteen fellow beings adrift in an open boat, among islands inhabited by cannibals, without as much as one musket with which to defend themselves, was in itself an act of potential wholesale murder. According to the law of the sea, by the act of seizing the ship they automatically became pirates. Having destroyed the *Bounty* they hid themselves from justice on a remote, and then uninhabited, island, called Pitcairn. Here, with some native men and women, imported on the *Bounty* from Tahiti, they established a unique settlement which still stands today. My story, however, deals with Lieutenant Bligh's feat of the navigation of the launch, after being driven from the ship in mid-Pacific, and not with the subsequent fate of the mutineers, which is a story by itself.

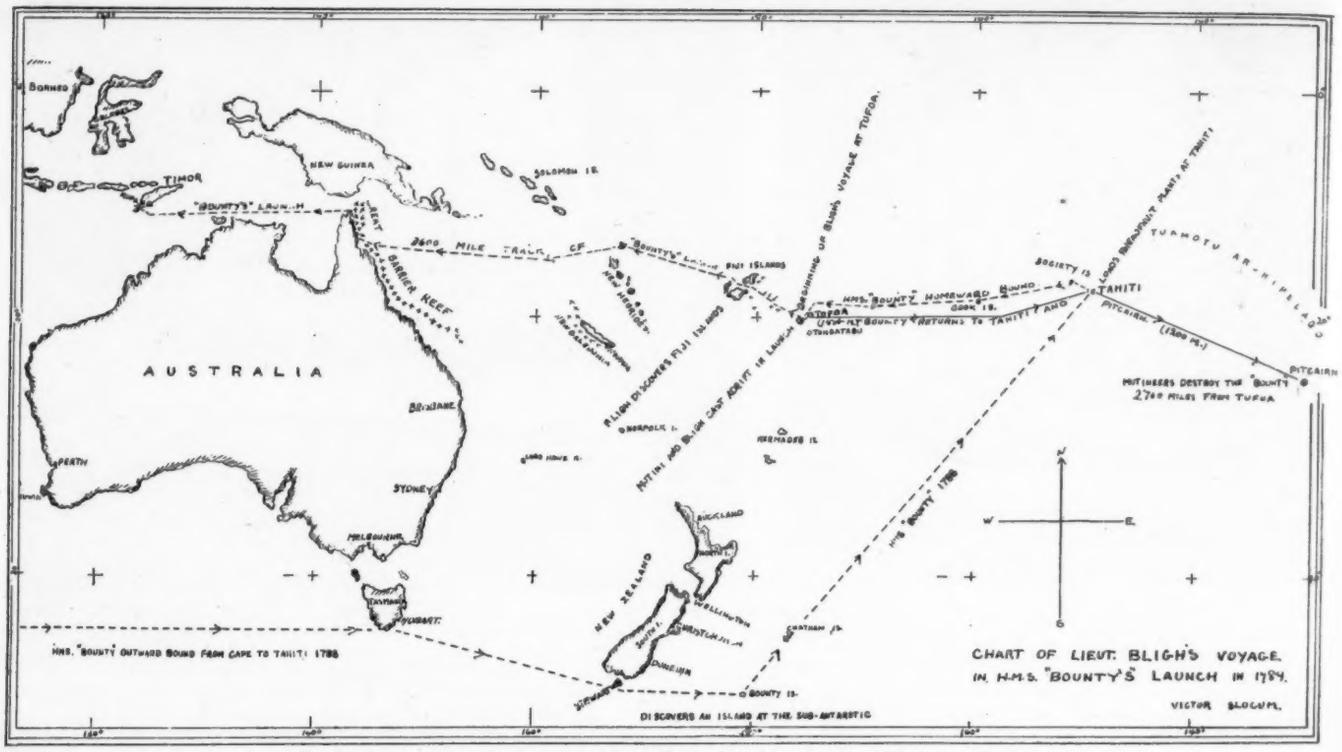
Because my earliest impressions of life were received in Australian waters, I naturally became familiar with the traditions and history of the South Seas; but not until 1921 did I have the good fortune to actually sight Pitcairn, the focusing point of the very epic of the Pacific. It was an island I had never expected to see, as it was far removed from the beaten track of commerce, though this has been altered since the opening of the Panama Canal. I had begun to think of it as one of the half mythical islands we read of. Part of the fun of voyaging is to see if things and places are really there, and thus to verify both romance and geography.

I was second mate of the *Donald McKay* at the time and we were making a passage from Noumea to the Canal. Our last landfall had been an interesting view of the volcanic island of Rapa-iti, at a distance of ten miles. I had anxiously spaced off the chart, which assured me that we were to pass historic Pitcairn during the hours of daylight, which was better luck than we had had on any previous voyage, or since. If one could only heave-to in order to see the sights while passing them, professional seagoing would be relieved of much monotony.

At noon, Sept. 28th, as I was relieving the bridge, I had the thrill of making out the island. By 2 o'clock I had completed and entered the four point bearing in the log, estimating that the island when abeam was at a distance of 22 miles. Pitcairn is but 2½ miles long and is described as steep and rocky with a landing place on one side only. There was not much to see of it at such a distance but the bare outline, which was not more positive in value than the dark rain clouds which hung low on the 2,000-foot peak, as they do on high tropical islands. I made a sketch of it in my notebook and for the remaining two hours of the watch I kept the glass glued to the island until it faded over the port quarter, into the purple atmosphere. I HAD SEEN PITCAIRN. Maybe at some other time I may view it at closer and more satisfactory range.

I then made a fresh study of Bligh's boat exploit by overhauling all the matter I could find relating to it in the chart house, and checking up his course on the sailing chart. Also, I employed much of my watch below time in making an exact model of the launch in which the captain of the *Bounty* and the 18 loyal members of the ship's company were set adrift. This I did from measurements and carefully made templates from the builder's draught which is to be found in Bligh's *Narrative of the Mutiny*, which was printed in London, 1790. I had obtained a copy bearing that date, in Sydney, while I was there, and which I was lucky enough to get for three guineas. Some of my shipmates, however, thought I was a "nut" for paying such price for a book yellow with age. To me it was a gold mine, for there was fascination in bridging over 131 years from the lithograph to the block of wood.

As the form of the model developed I was astonished and delighted at the little ship, which my photographs will show. The original launch was 23 feet in length, 6 feet and 9 inches beam, and 2 feet and 9 inches deep, and every inch boat. The design, however, seems to have been



Track chart of the long voyage of the *Bounty's* launch, from Tofoa to Timor.

the usual thing for a ship's boat at the time, judging by some drawings in the *Atlas of Captain Cook's Voyage*. From the description in the *Narrative*, she was rigged with a double dipping lug, the usual boat rig of the period, and to this day as portable as any for the purpose intended.

It was by mere chance that Bligh got as good a boat as he did, for the first intention of the mutineers was to turn him adrift in the cutter, the smaller of the two boats carried on deck, only 16 feet long and stove in the bilge from pounding on the beach, and leaking badly. While the ringleader was guarding the commander abaft the mizzenmast, with a drawn bayonet at his throat, the "committee of arrangements" held a violent altercation over the selection of the boat, and with a grim sense of decency they finally hoisted out the better of the two. To this streak of luck Bligh owed his life, as much as to anything, and it was the reason why some of the gang (who were soon after captured by the *Pandora* at Tahiti) were not hanged to the yard-arm in Portsmouth, as shown by the report of court martial proceedings held on the *Brunswick*.

The seizure of the *Bounty* was made at daylight on the 28th of April, 1789, and while she was on the homeward bound passage, near the Friendly Islands, about 30 miles from Tofoa Island. When the launch was ready the ringleader said, "Come, Captain Bligh, your officers and crew are in the boat, and you must go with them; if you make the least resistance you will instantly be put to death." Bligh's statement at this point is: "and without any further ceremony, holding me by the cord which tied my hands, with a tribe of armed ruffians about me, I was forced over the side, where they untied my hands. Being in the boat, we were veered astern by a rope. A few pieces of pork were then thrown to us, as well as a quadrant and four cutlasses, and then we were at length cast adrift in the open ocean."

On asking for some firearms, Bligh had been laughed at and ironically told that he was well acquainted with the people where he was going and would not need them. The ship's carpenter, who had been ordered in the launch, was allowed to take his tools, but not without much opposition from some who "damned his (Bligh's) eyes" and told him he would have a "vessel built in a month and find his way home." Bligh's clerk had managed to secure for him his commission and his journal, but was not allowed to take either chart, ephemeris, or "timekeeper."

How Bligh ever managed to get his latitudes by observation has always been somewhat of a mystery to me. A possible solution is that he may have had a secret notation of the sun's declination in his journal, or he may have remembered the declination and the daily rates of change and made up a table in the boat. In Cook's and Bligh's time, the navigator, from having to depend on himself, was much more resourceful than the navigator of the present time. Bligh's longitudes were by dead reckoning, using Tofoa as the prime meridian, and they were accurate enough to give only one degree and nine minutes error on making the passage at the Great Barrier Reef.

On reaching Tofoa at nightfall, the launch came to a grapnel in a cove under some cliffs and was held for several days by bad weather. The crew searched for food and water but it was found to be very scarce on this volcanic island, which even the natives did not use, except for a visit. On pulling from the ship, Bligh had made up his mind to throw himself on the generosity of King Poulaho and request a supply of breadfruit and water sufficient to reach the Dutch East Indies. Poulaho lived on Tongatabu, at the southern end of the group of islands, about 70 miles from Tofoa. Poulaho had expressed great friendship for Captain Cook, and also knew Bligh; but Cook had made his appearance with a show of organized force — which made a difference, as Bligh found when he landed in an unarmed launch among crafty savages.

On the third day a few natives visited the encampment the party had made at the mouth of a cave, and traded breadfruit and cocoanuts for trinkets. They discovered that there were no firearms and the *Bounty* party noticed

with uneasiness that the natives camped near by for the night and held consultations around a camp fire. On the next day their numbers were augmented by other groups that came in canoes, and when some chiefs arrived on the scene there was a signal for open hostilities. This was made by the natives knocking stones together until the clatter was taken up by about 200 that were on the beach. Bligh, who knew their ways, foresaw a general massacre and gave the word for his men to push through their line and board the boat.

Word had already been sent to the standby crew aboard to haul the launch in close if they saw the shore party coming down the beach. The launch was moored beyond the rocks by a grapnel and a stern fast so that she rode head to the surf. As the last of the party were climbing into the boat the stones came like a shower of shot from the savages which lined the beach. Evidently they had not dared attack the white men on shore, where there was more chance of their defending themselves, but thought they would have them at greater disadvantage in the boat. The shower of stones was hurled with "great force and accuracy" and ranged in weight "from two to four pounds". The crew tried to return the fire with some of the stones that fell into the boat but they were not in it with the savages in heaving force.

Before the launch managed to haul out to the grapnel, one of the party fell and was killed. This was John Norton, quartermaster, who was on his second voyage with Bligh. The rest of the crew did not escape without being badly bruised, and much of their precious provision was lost in the attack. They then saw that if this was a sample of the hospitality handed out in the Friendly Islands, it would be of no use to see King Poulaho. If they were not massacred at Tongatabu, there would be a long chance of loosing their boat and gear.

In the morning Bligh told his people that their only chance was for them to make the Dutch Settlement of Timor, which was the nearest point of communication with England, and fully 3,600 miles to the W.N.W., but, directly to leeward. This was an advantage, but even with the strong S.E. trades it would not be safe to allow less than eight weeks for the voyage.

An account was then taken of what was left of the provisions, and there was found to be enough to last about ten days under normal conditions. To be exact, there were 150 lbs. of bread; 28 gallons of water; 20 lbs. of pork; 3 bottles of wine; 5 quarts of rum, and a few cocoanuts. The breadfruit which they had accumulated at Tofoa had been crushed in the bottom of the boat during the fight when leaving the beach.

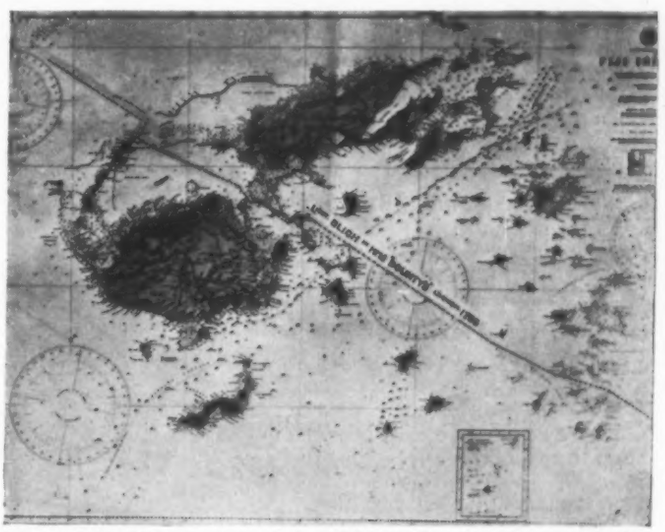
The navigating equipment consisted of a compass; quadrant; a book of latitudes and longitudes — and Bligh's own recollection of the situation of places obtained during his voyage with Captain Cook.

Timor was decided upon and a mutual agreement was entered into by all hands to live on one-quarter rations of bread and water as long as it was necessary to do so to make the passage. This was little else than slow starvation for eight weeks, if they could last that long. The allowance of bread was later standardized by rigging up a pair of scales out of two cocoanut shells, with a pistol bullet which weighed 25 to the pound, or just 272 grains. This was the amount served out three times a day as a minimum. The allowance of water was fixed at one-quarter of a pint per day per man. A quarter of a pint is four ounces and fills an ordinary glass about half full, not more than enough, in 24 hours, to wet the throat. Had the weather come off calm and hot they would have perished from thirst, but the prevailing rain squalls which accompanied the driving gale soaked their skins and relieved them from the most maddening of all torments. The soaking with fresh water was so constant that they had to dip their clothes in salt water and wring them out for greater warmth.

On putting the boat to rights from the effects of the stoning from the beach at Tofoa, Bligh decided on a start. At 8 P.M., May 3rd, he set the watches in regular ship style and bore off on a W.N.W. course, under a reefed lug foresail. During the night the wind increased in force, and at daybreak the sun rose fiery and red, which was taken as a sure indication of heavy weather to come. By 8 the wind increased to a gale, while the sea ran high enough to becalm the sail while in the troughs.

All sail possible had to be carried to keep the launch from being boarded and swamped by the following seas. Baling had to be smart, with no let up. It was for their lives. They could do no more than keep dead before the sea, but the boat showed such wonderful seagoing qualities that they soon got over their fear of foundering.

On the second day, although the sea increased, Bligh hauled the course to the northward as much as the boat would stand, for he had an idea that the voyage was to be



Track of Bligh's trip through the Fiji Islands, which he practically discovered.

used for something else than simply sailing to Timor. By so doing, not only was better weather to be expected but there was a chance to do some exploring. Misfortune, privation and danger did not destroy the discoverer's instinct in Bligh, for he knew that he was headed for a large group of important and undiscovered islands which the natives of the Friendly Islands called "Feejee." The direction of these had often been pointed out to both Cook and Bligh. The natives had an idea of their distance and extent, as well, and Cook considered them to bear W.N.W. from Tongatabu. The people of these islands, they said, were mighty in battle and voyaged to other islands in great war canoes. Tasman had reported some of the smaller of these islands that are in the northeast section of the group, and in 1773, Cook had discovered Turtle Island, which is the extreme southeast, and the most outlying island of them all.

With keen expectancy Bligh held his W.N.W. course with the firm assurance that beyond all these he would see the real "Feejees." It was this quality of optimism and imagination which made him superior to the troubles in the launch, and that infused in his people a spirit of confidence which eventually carried them through. He could forsee the outcome of his plans to reach Timor and to make more discoveries as well.

After a second day of gales and high seas they began,

one by one, to sight the outlying islands of the group. Though drenched and chilled from constant wetting, as were all of his crew, Bligh was careful to keep a close account of his runs and navigation. A log was improvised, and by counting the seconds, they could get the speed "with some degree of exactness." He made a running survey, with sketches, of the islands, which for the purpose of identification were indicated by letters as, "K" Island, "L" Island, etc. This running survey was accurate enough to enable him to verify and check up on his own discoveries on his succeeding voyage to these islands, in the *Providence*.

The launch's track through the Fiji Group looks like a steamer's track. It shows an avoidance of the islands. To this boatload of castaways they looked fair and delectable, and there was food and water for the mere taking, but they had had their lesson at Tofoa and dared not land without firearms.

Bligh entered the group between the islands of Mothe and Namuka; then steering N.W., passed Vanua Vatu and Mola; proceeded northward between the islands of Koro and Makongai, and after making the Makongai Passage, suddenly, and without a warning ripple the launch ran over a coral shoal carrying but four feet of water. This identifies the point, where at sunset, Bligh came between the two great islands of Vanua Lava and Viti Lava.

Entering the Vitu-ira Channel, he set the course for the night at W. by N. according to his own account. We are here able to check up on his steering, for the actual magnetic course on this run was W. by N. ¼ N. A lesson to small boat navigators! It was as direct a course for Yasawa and the Round Island Passage to sea as though he had known it was really there, and a magnificent piece of seamanship. In the morning the launch sighted some large sailing canoes heading out from Yasawa Island; but taking no chances with more hostilities, she held her weather gauge with the wind on the starboard beam, and managed to outsail them to the open.

William Bligh, captain of the *Bounty* and later an Admiral in the Royal Navy.

This passage of Bligh in the *Bounty's* launch through the Fiji Islands made him the first white man to record the discovery of the larger and western islands of the group. In the light of modern research, Bligh is the real discoverer of the Fiji Islands. The credit of being the first navigator to visit them has long been given to Dumont d'Urville in the *Astrolabe*, when in fact Bligh preceded d'Urville by 38 years. The Fijis were first known as "Bligh's Islands."

Once back on the open ocean, the launch ran into a heavy rain squall, and for the first time on the voyage they were able to quench thirst and saved 20 gallons of water as well. This was on the fifth day from Tofoa, and they had covered 420 miles, averaging 84 miles per day. They had now 600 miles to look forward to in the run to the New Hebrides, and Bligh took care to instruct his people in the route to Timor. This was in the way of a talk, in which he reiterated distances and courses as well as descriptions of New Guinea, which was to be avoided, and "New Holland" with her inland sea behind the great reefs. They knew nothing about Timor — some not even the name. This was a diversion of the mind as well as good judgment, and cannot be taken as an indication of despair, for as nature became exhausted and they grew weaker in body, the spirit of the whole crew rose, by their captain's example, and nobody thought of giving up. Timor was their only thought.

A week later, after sailing before storms and with heavy rains they made the New Hebrides, averaging 86 miles per day. During this time Bligh carried out a regular routine of improvement in the boat which helped to keep the men's minds from themselves. He contrived a weather cloth to keep the heaviest spray off; the quarters of the boat were raised nine inches by having the seats of the stern sheets nailed on, which stopped some of the sea from breaking over the stern, though two men had to bail constantly to keep the boat from swamping; a pair of shrouds were fitted to each mast, and a grommet was seized to each quarter so that it would be possible to steer with an oar if the rudder was carried away.

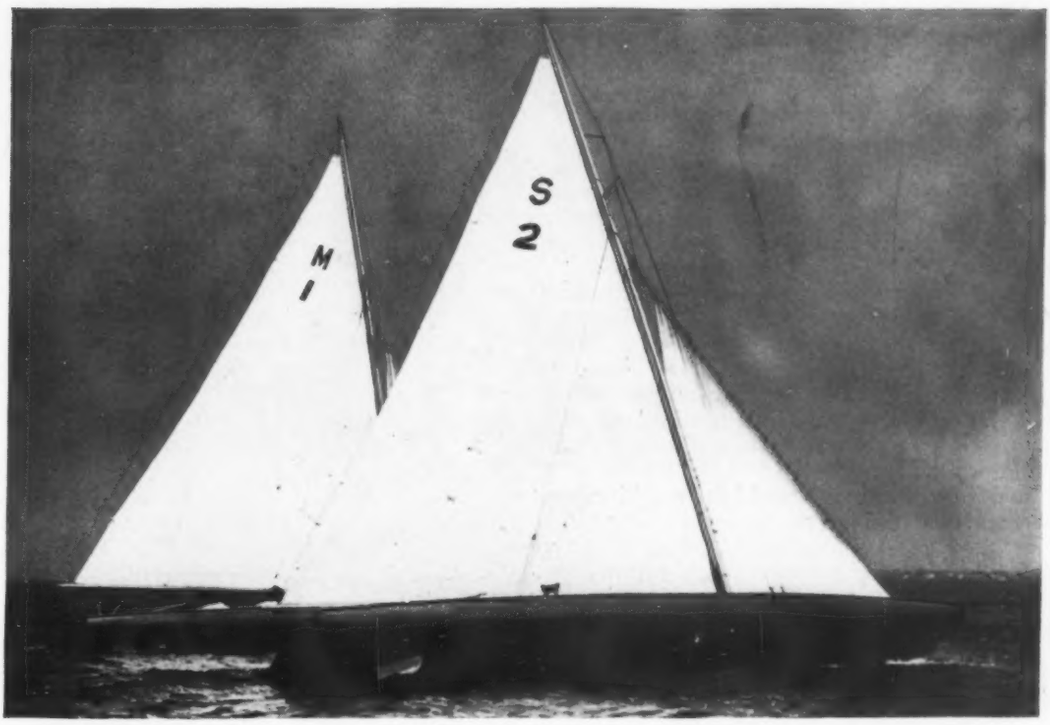
From Vanua Lava to the Great Reef of Australia, as it was then called, was now the longest pull on the voyage, 1,380 miles, and this they did in 14 days, an average of nearly 100 miles per day. The weather conditions were similar to those experienced on the run from the Fijis. Extreme hunger now began to show itself but this was eased up once or twice by catching a sea bird by hand. It was killed and divided among all hands on the "Who shall have this?" system. One man would divide the bird into 18 different parts, bill, offal, webbed feet, contents of maw, etc., and then call out to another man who was blindfolded, "Who shall have this?" pointing to one of the divided portions. The blindfolded man called out the name of the man who was to get the morsel, and there was no beating one another to it. The blood was saved and given to one or two of them who were drooping the most. Bligh says himself that after the first pangs he felt no hunger, though the bosun paid him the compliment of telling him that he looked worse than the rest. On part of this run, Bligh was afraid that the scend of the sea would drive them too far to the northward and on to the coast of New Guinea, which had the most evil reputation for cannibalism. To him that meant the end of the voyage.

Before daylight on May 28th, just a month since being cast off from the *Bounty*, the helmsman reported the sound of breakers booming against a reef, and the launch was hauled into the wind. By 9 in the morning a break in the reef was found, through which they passed into smooth water. Hardship was for a time forgotten, as anyone must know who ever ran into shelter. This gap in the Great Barrier reef has ever since been called Bligh Boat Entrance, and is in latitude 12° 51′ south. It was here that Bligh found that he had outrun his dead reckoning longitude by only one degree and nine minutes.

On the 29th of May they found a fine sandy point and a bay at an island which was a little removed from the main land. Here they landed and called it Restoration, not on account of their own salvation but from a political anniversary which came on that day.

They discovered some fireplaces and shell heaps which had been left by natives, but there was nothing to alarm

(*Continued on page 82*)



Racing Class E Inland Lake scows on Barnegat Bay. They are the most sensitive racing craft afloat.

Sailing an Inland Lake Scow

A Brief Discussion of Their Peculiarities and the Factors Which Make Them the Fastest and Most Sensitive Racing Craft Afloat

By F. Slade Dale

ALTHOUGH it would be hard to draw accurate lines of distinction between all of the various classes of racing craft, it is safe to say that as a type the light, sensitive, jib-and-mainsail racing scow occupies a place in the sport peculiar to itself. Bordering on the freak, or racing machine type, the Inland Lakes scow furnishes an excellent example of the delicate type of racing craft which makes such a strong appeal to a large number of yachtsmen.

When you step aboard a 28-ft. Class E scow for the first time its flightiness is a revelation; it has the acceleration of an iceboat, and when it spins about in the space of three seconds or so, the stranger must watch his balance. Also, when it starts planing in a good breeze its speed of from 14 to 17 miles an hour means that a real thrill awaits the man accustomed to keel boats who has done all his sailing with a sluggish chunk of lead under him.

Scows have been used on the Inland Lakes of Minnesota and Wisconsin, and on Lake St. Louis, Canada, for many years, but until their introduction last summer on Barnegat Bay they were comparatively unknown to eastern yachtsmen. Thus far, with but a single racing season behind them, Barnegat's skippers still look upon the intricacies of scow-sailing as a matter requiring much study, and this article pretends only to set forth the impressions which a year's racing has made upon one accustomed to the cat-rigged sneakbox, rather than to discuss the scow with the authority of one long familiar with the type.

When the nine Class E scows arrived from Oshkosh last year their invasion of the domain of the sneakbox was looked upon largely as an experiment of doubtful success. The type of modern 20-ft. racing sneakbox, designed by Mower in 1914 and now carrying the Marconi rig, has long been considered the fastest 20-ft. boat in the world; with its 33-ft. mast and 430 sq. ft. of sail it is a thrilling sort of racing craft itself, and in its home waters had so endeared itself to racing men that it appeared to be the one class which would always enjoy a foremost place in New Jersey's yachting activities. Thus it may be seen that when the scow came along it needed more than ordinary merit to find a permanent place for itself in the schedule of the Barnegat Bay Yacht Racing Association.

Factors which arise in sailing the scow are so interwoven with, and dependent upon, the peculiarities of the type that a brief discussion of a typical design should be given first consideration. It may be said that for shoal, smooth-water sailing the scow has all the attributes of speed. With an overall length of 28 feet it has a fine, easy entrance and a clean run, both of which are necessarily abbreviated in the shorter 20-ft. sneakbox. Beam is limited to a maximum of 6 ft. 9 in., but the sail plan of only 285 sq. ft. makes it an easy matter for a crew totalling the maximum allowable weight of 550 lbs. to carry full sail in even a stiff breeze.

In plan, the stern is square and the broad bow is a flattened curve — only one of the boats on Barnegat is of the "pointed bow" type. In profile the sheer is straight; the rocker of the keel forward of amidships is only 8½ in. in 12 ft., and aft it is the same in 14 ft. Freeboard is about 12 inches. With such slight rocker to the keel, and with a

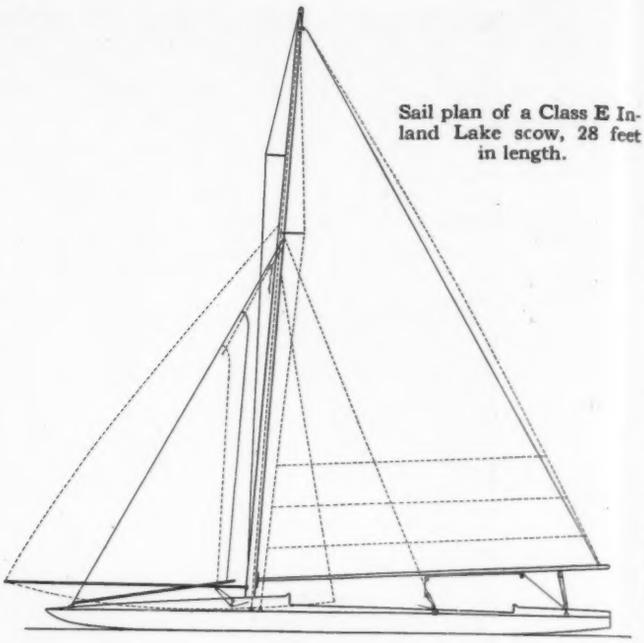
flat floor, the diagonals and buttocks are quite straight and, when heeled, the actual waterline is a long smooth curve on both sides, with but little distortion. There are no reverse curves in profile, such as have marked scows designed to reduce their waterline measurement.

Two bilgeboards and two rudders set at an angle of about sixteen degrees contribute to an efficient sailing form when the boat is heeled, although factors such as wind and sea, wetted surface and weight of crew largely determine whether or not the hull shall be kept heeled to the point which puts the boards and rudders in a vertical plane. The area of each bilgeboard below the bottom of the boat is about 6.5 sq. ft. and of each rudder about 1.5 sq. ft. Incidentally these areas are in the same ratio to the scow's sail area as the board and rudder of the sneakbox are to its sail area, and considering the finer degree of balance which the scow's rig and its easy lines afford it would appear that for most conditions the scow is oversupplied with lateral plane.

The straight sides and full ends make for stability, and even in models with slack bilges the power to carry sail is not unduly impaired. Heeled over on its sailing lines the scow is in effect a long, straight-lined, round-bottom boat, offering little resistance to forward motion and having the advantage of the righting moment of the hull and live ballast, which remains lifted out of water to windward. No matter what importance is attached to the shape of the bilge it is probable that a greater factor in the design is the amount of lift given to the bow and stern, for unless the keel is rockered just the right amount the ends will either not come down to the water on the proper sailing lines or will be submerged too heavily and cause the boat to "stick" in her movements — as is the case when overloaded with ballast.

It is in sailing to windward that the extreme sensitiveness of the scow comes to light. A fine degree of balance attained in the proper manner is essential for speed to windward, and only the man at the tiller can judge whether or not his boat is "right" in this important respect. And balance in the scow is elusive; it frequently vanishes between one tack and another, sometimes returning of its own accord and at other times only after extreme measures on the part of the skipper. A slight change in the strength of the wind or in the form of the sea, an unconscious shifting of live weight, or some alteration in the position of the boards or the trim of a sail — any one of these is enough to throw the boat out of balance, but the very sensitiveness which makes the boat susceptible to such influences makes it easy for the helmsman to detect that something is wrong.

If it were only a matter of correcting a lee or a weather helm to restore proper balance, once it is lost, the skipper's task would be an easy one; but in order not to sacrifice speed he must not only restore fine balance but he must restore it through such an arrangement of all his variable factors as will result in the fastest racing combination. Moving the jibsheet man forward two feet may have the same effect on lateral resistance as dropping the bilge board two inches lower, but if the boat happened to be already on her best sailing lines it might be disastrous to put the bow lower, and the skipper might choose to make his adjustment with the board, and accept the increased frictional resistance as the lesser evil. Or he might ignore the lateral resistance and get the same result, as far as balance is concerned, by easing the jibsheet and causing the center of effort to move aft; in other cases he might even send a man to the forestay turnbuckle to alter the rake of the mast. Thus, there are many factors to be considered in their relation to a proper balance of the boat, but vital as that matter is, it is not the whole secret of speed by any means and the skipper can not afford to lose sight of the multitudinous little details which, in the aggregate, may mean the difference between winning and losing.

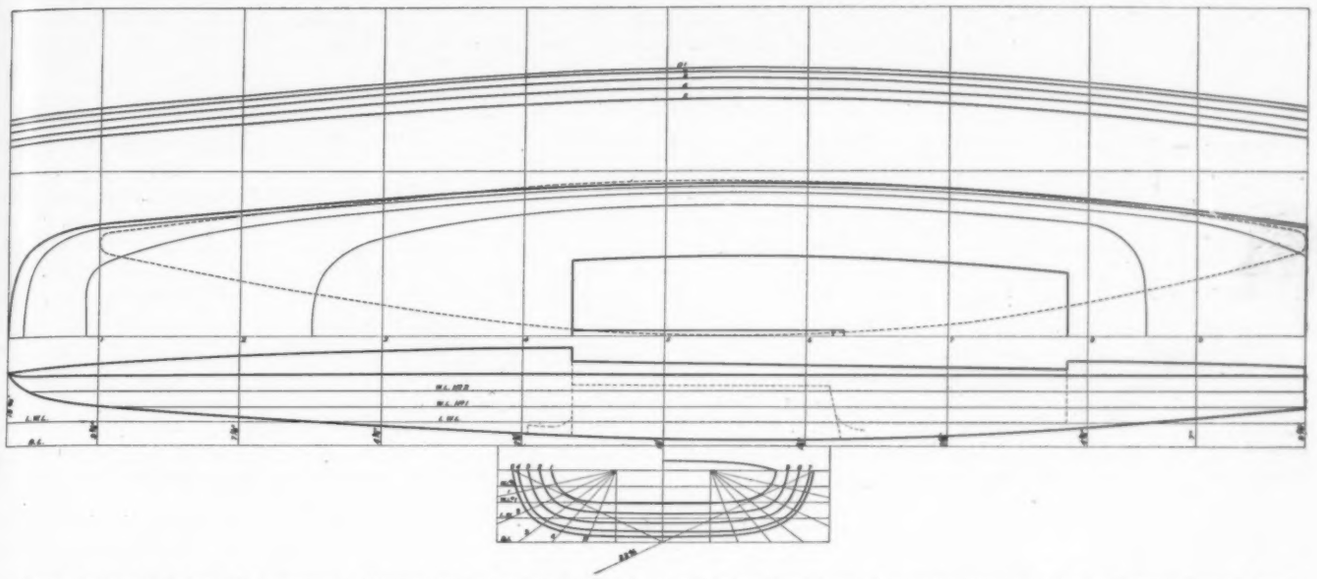


Sail plan of a Class E Inland Lake scow, 28 feet in length.

Take for example the apparently simple operation of going about. An E scow can be put about in 3 seconds, although it is doubtful if anything is gained in a race by doing it in less than 5 or 5½ seconds. But aside from the element of time the skipper can influence the action of his boat by the manner in which he distributes his crew; if the live ballast is all centered amidships the hull can be spun around with appreciably greater acceleration than if the weight is placed on the extremities of the boat, where the inertia of the mass would have a dampening effect on the turning speed. Obviously the effect of moving the crew to the extremities of the deck would be negligible in a heavy boat or in a slow turning one, but in the light scows hardly a move can be made without having a noticeable effect — and perhaps that largely explains the fascination of racing them.

The skipper who can develop a really sensitive "feel" of his scow — to a degree not possible with most types of racing boat — has an asset not approached by even the greatest expertness in sailing by the fly or thread on the rigging; he is a step beyond, and is not impelled into working the tiller excessively in a vain effort to take advantage of passing fluctuations in the belief that each is a steady, favorable slant of wind. Rather he is guided by the action of the boat as a whole, and with but occasional glances at the sails he can tell instinctively how his boat is behaving. It is true that the helmsman unconsciously gains impressions from general conditions, and when he prefers to avoid wearing a hat the better to feel the wind on his face, it may be assumed that a few bits of thread here and there on the rigging may also assist him in a general way, and perhaps cultivate an artificial alertness. In that sense such wind indicators may begin to serve the purpose for which they are extensively used on other types of racing yacht.

The rudder of the scow is a different matter from that of the catboat; it makes no considerable addition to the lateral resistance of the boat, and its sole purpose is that of steering; any pull on the tiller, weather or lee, means that there is a lack of balance between the driving force on the sails and the lateral resistance of the boat. A slight weather helm is often tolerated, not because it is right but



Lines of Class E Inland Lake scow, designed by Jones and LaBorde. A study of these lines show why the scow is the fastest type of boat for its size afloat.

because it is an error on the safe side and saves the skipper from bigger losses which inattention at the tiller might incur if the boat had a tendency to fall off.

Aside from the question of indicating balance the rudder of the scow deserves attention in two other respects. One involves the old rule about moving the tiller as little as possible when sailing on the wind. It is true that a constant working back and forth will greatly affect speed to windward, but in their anxiety to avoid causing a drag of the rudders too many skippers are slow to take advantage of a favorable puff, and before their boats work up into the wind the puff is gone. Similarly, when headed by an unfavorable slant there is a general tendency to swing the bow off slowly, with consequent loss of headway. Of course it is as bad to err on one side as on the other, and the helmsman who jerks his boat zigzag fashion into and away from every little puff and lull loses more than his too conservative opponent. Nevertheless, it is safe to give the tiller a quick snap if at that particular instant the rudder is trailed out directly astern or is turned so that the resulting lateral force on the rudder will, as if by impact, start the boat turning without exerting a force opposed to forward motion. There is then no prolonged drag of the rudder as is the case when the tiller is moved slowly and the rudder is held at an angle for an appreciable length of time. It might be argued that such a suggestion if carried to its logical conclusion would result in the skipper's sculling his boat forward by well-timed jerks of the tiller, but while the same underlying principle may be discernible in sculling, no such harsh interpretation of meaning is implied.

The other matter in connection with the rudder deals only with double-ruddered boats whose tillers are joined by a tie rod. Many captains satisfy themselves that the two rudders are parallel by determining that the two tillers are parallel, and are then content to start a race. Even if the rudders always lined up with the tillers the fact that the rudders are parallel does not mean that they offer the least resistance to headway, and in fact it is doubtful if the parallel position is ever the fastest. It may be the safest in the long run, considering windward and leeward work in light winds and in heavy, but it is probable that at the risk of some error a faster position can be determined after a few trials. The trials should not be based upon performance relative to another boat, however, for the change in rudder positions must be so slight that its effect would not be perceptible in an actual race. Rather the experimenter must be guided by the position which the two rudders assume *relative to each other* when allowed to trail independently of one another with the boat under perfect balance on various points of sailing. The water flows under the bottom more nearly along the diagonal plane intersections than along the buttocks, and thus the rudders may converge toward the stern a considerable amount. An inch and a half convergence between two rudders only twelve inches long was found to be desirable in one case.

A discussion of sails seldom amounts to more than vague comment, for even with sails of opposite characteristics of set or flow the variations in form are so vague as to make description impossible except in terms of indefinite generalities. But in passing it might be said that too much emphasis is laid upon the importance of "a good pocket along the mast where the positive pressure of the wind can develop a driving force." A fair curve from luff to leach is essential, of course, but it is because of the effect on the set of the rest of the sail rather than because of any intrinsic value as effective driving area that fullness along the mast can be of importance. A portion of the sail which is continually on the verge of shaking, and indeed on many boats is seldom allowed to draw full, adds nothing to the driving force on the boat; the wind along the hoist of the mainsail, where it eddies around the mast, is in no mood to exert much pressure on the canvas immediately next the spar.

The Class E scow probably has no requirements as to sail form or draft peculiar to itself. A small sail moving rapidly into the wind must be a relatively flat one if much driving force is to be derived, and on that account a trace of the iceboat's flatness of draft might be justified in the scow; but the scow's real speed is off the wind, and although on that point of sailing its speed might be said to approach that of a slow-moving iceboat, the eased sheet of the scow limits the similarity between the two. In the case of the iceboat the apparent wind — the resultant of the velocities of the actual wind and of the boat — strikes the sail from a direction far forward of abeam, while with the scow it would never reach such a point and the sails, even when planing at the highest speeds, would always be eased off.

Knowledge of the exact angle between the true wind

(*Continued on page 84*)

Engine Room Ventilation

By S. S. Pierce

IT is usually conceded by all concerned that the engine room of a small motor cruiser or auxiliary requires efficient ventilation, and yet, as a rule, an engine room so ventilated is seldom to be found. The dangers and evils of improper ventilation are: Fire hazard, loss of power, dampness, excessive heat, and poisonous atmosphere.

Of these evils, that of fire hazard is probably best understood by the general boating public. We all know that gasoline is constantly evaporating and producing an inflammable gas (except in very cold weather), that some gasoline will find its way into the bilge, in spite of the best of care, where it will float on top of the bilge water and produce this dangerous gas, be it ever so little; that this gas is heavier than air and, if undisturbed, will lie in the bilge, accumulating little by little until it has finally reached such a height that it might possibly become ignited by a spark from the magneto or a backfire in the carbureter. Fortunately, most people are fully aware of the importance of keeping the bilge dry, and fortunately, in this respect at least, the commercial gasoline of today is far less volatile than it was a few years ago. In spite of this general knowledge, however, fires and explosions occasionally occur even today.

Loss of power due to defective ventilation is less generally understood. Let us take, for example, a four-cylinder, four-cycle engine having a bore of 5 inches and a stroke of 6 inches, running at 500 r.p.m., at which speed it would consume, theoretically, 67.5 cubic feet of air per minute. In practice this would be somewhat less, owing to the resistance of intake valve and venturi tube, skin friction of passages and manifold, etc. With a supercharger it would of course be more. For example, let us call it 60. Let us suppose that it is under the bridge deck of an average 40 feet cruiser in a space of about 360 cubic feet. If this space were to be hermetically sealed, the engine would run for six minutes, at the end of which time it would stop dead, having exhausted all the air in the engine room. In other words, we must supply the engine room with 60 cubic feet of fresh air per minute *over* and *above* whatever may be required for ventilation.

Dampness and its deleterious effect on ignition systems has been discussed at some length in a previous article.

Excessive heat will always be present in a poorly ventilated engine room. This condition is not only uncomfortable to human beings, but entails an increased fire hazard, as the higher the temperature is the more rapidly will gasoline evaporate. (Gasoline has been known to boil at a temperature as low as 158° Fahrenheit.)

Poisonous atmosphere is rapidly becoming a thing of the past in even badly ventilated engine rooms, as most engines are now built with the crankcase breather connected to the carbureter air intake so that the crankcase fumes can not escape while the engine is running, and what little is given off just after the engine has stopped can do no harm. A leaking exhaust pipe, however, in a poorly ventilated engine room is a grave menace to human life.

In Fig. 1 is sketched an arrangement which gives excellent ventilation in an average power cruiser, say, 35 to 50 feet long. In this case it is assumed that the engine room is completely bulkheaded from the rest of the boat, and that all hatches, doors or portholes are closed. It will be noticed that the incoming air is delivered to the engine room as far aft as possible and relatively low, while the ultimate outlet through the stack is as far forward and as high as possible. In other words, the air is induced to flow *from the coolest to the hottest* part of the engine room, constantly rising on the way. Any attempt to divert this natural flow will fail to provide proper ventilation unless forced draught is resorted to.

In a motor boat, in which the engine room is short, and *absolutely* bulkheaded from the rest of the boat, if the exhaust pipe leads from the after end of the cylinder block, there is no reason why the stack should not be aft and the cowl ventilators forward, as far as ventilation is concerned. Such an arrangement is, however, rather poor for many other reasons, such as spoiling the appearance of the craft by having the stack too far aft, necessitating full headroom over the after end of the engine where it is least needed, etc.

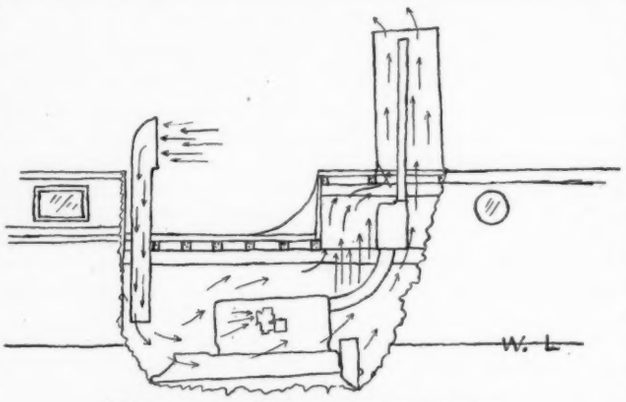


Figure 1. Ventilation for an engine room.

The arrows in the sketch indicate roughly the flow of air. The grave error, so often made, of having the incoming air delivered too high up in the engine room (usually at the top) has discouraged many people from using cowl ventilators at all. The conventional cowl has no prolongation below the deck to which it is fitted, but this does not mean that it was originally intended to stop there. A short length of stove pipe to suit each particular installation can be inserted from below by any tinsmith for a few cents. We all know that hot air rises and that cold air sinks, but as the cold air which enters the engine room is met at all points by rising hot air, ventilation can not be complete unless this cold air is admitted at a fairly low level. A further advantage of low inlet is, that when spray or rain comes down the duct it will not wet the engine, but fall directly into the bilge. Theoretically, the inlet should be brought down into the bilge, but practically, this might prove dangerous under certain conditions. For example, should the engine be started and the boat gotten under way after a long while at anchor with everything closed, and should there be an accumulation of gas in the bilge, the gas would be stirred up suddenly in a body, reaching a point of possible ignition (magneto circuit breaker, open pet cock, etc.) mixed with enough air to make an explosion possible; whereas, if the air inlet be about level with the top of the engine, the gas will be carried away gradually and mixed with so much air as to form a relatively lean and harmless mixture while passing the danger points. The possibility of such a contingency may seem as remote as the moon to the casual reader, but the results of fire or explosion on a small

(*Continued on page 86*)

Dr. Henry C. Rowland, owner of *Mary*, standing in the companionway as the little ship is entering Beaufort Harbor.

Some Gulf Stream Navigation

How a Misguided Chronometer Failed to Spill the Beans

By J. T. Rowland

WHEN my brother Hank invited me to sail *Mary*, of whom much has already been written in YACHTING, north with him in the budding month of April I figured we might see a little weather, but it never occurred to me that I was going to have a great lesson in small boat navigation. Problem: How detect a three-minute chronometer error that you don't even suspect, while still out of sight of land, and make a perfect landfall despite it?

It sounds like a large order. That we did it is no great credit to me, for about all I did was to work up my sights and wonder why in blazes they didn't "gee" with common sense; Hank's judgment and, perhaps, a certain amount of seamanlike intuition were what made it possible. The solution, as it finally worked out, was so perfectly logical and convincing as to settle any doubts; and that was the more extraordinary as it involved no observations other than a meridian altitude which gave us a latitude of which we could feel sure. I don't claim that there was anything mysterious about the matter: on the contrary it was only an application of principles that everyone who goes out of sight of land should have at his finger tips. But it was an interesting example of the necessity of using *all* data that you can possibly bring to bear.

As I said, we did not even suspect the clock. How it got to be more than three minutes out on its rate I do not know and it does not matter so far as our purpose here is concerned. The thing to remember is that we had no inkling of it. On the afternoon of April 9th, being then by account some 60 miles southeast of Cape Fear, I decided it was time to get a good fix and shape a course to pass Diamond Shoals. Since leaving Mosquito Inlet (Fla.) on the 7th, conditions had not been favorable, for while it was mostly clear a sea was running in the Stream that made observations of doubtful value. *Mary* had come a-booming before strong west and southwest winds with only her big squaresail set most of the time.

But at noon of the 9th we had gotten a pretty fair latitude sight and as it checked with the D. R. we let it stand and marked down our noon position at A. (See chart.) When I began taking chronometer sights at 3:30 that afternoon conditions were much improved. Indeed it was quite moderate and so very clear that we began to look for a shift of wind. It was, therefore, a great blow to have my longitude work out nearly 40 miles further to the east than I expected — that is, at B on the chart instead of b. I used the old fashioned time sight, carrying forward my noon latitude corrected for the ship's run.

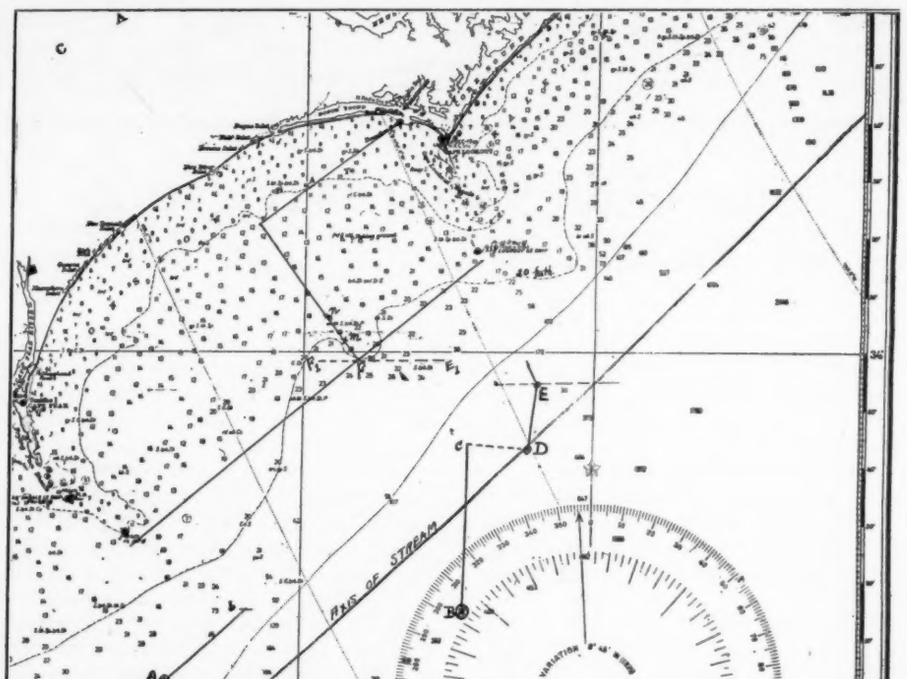
I could find no error in my figures, but just to make sure Hank and I each took a series of shots. I worked up both sets and they gave the same thing, within a couple of miles. So there seemed no doubt that our dead reckoning was worthless and I began to lecture Hank on the value of precise methods of navigation. He had been averse to bothering with longitude at all.

By this time the ship was virtually becalmed, so we took this fix at B as our 4 P.M. position. Hank, I afterwards learned, accepted it with mental reservations, but I did not know that at the time. At any rate it looked as though our fair wind was gone for good. As we both had a hunch that the next breeze would be out of the north my suggestion that we work to windward under power was approved. Accordingly, at 5:10, the motor was started and we shaped a course for Cape Lookout lightship, which bore N½E distant about 60 miles from our position by observation. Parenthetically, I may state that due allowance for leeway and drift of the Stream was made in all courses and runs, but I won't bore the reader with these details. The important point is that after proceeding on a northerly course for 30 miles by log we were obliged to heave *Mary* to. A head wind that struck in at 11 o'clock, butt-end first, accompanied by a steep swell, made progress toilsome. Of course we could have slammed her into it, but Hank very wisely determined to see what there was back of it before he went handier to the shoals, so we left the old girl to mosey along under reefed foresail while we got a good sleep. It is one of the best things *Mary* does.

Next morning dawned clear with a strong breeze at NE.

This was April 10th. We were still quite obviously in the Gulf Stream and since it was setting dead to windward I figured that its drift just about offset leeway made during the night. *Mary* had been slowly forereaching so I placed her 8 a. m. position at D on a conservative estimate, though it seemed likely that she might be a little further along. That is to say, I felt confident she was at least as far east and north as D, basing my reckoning on the fix at B secured the previous afternoon. This is an important point to bear in mind.

When Hank saw how things looked he decided to tack ship and stand up for Beaufort rather than bucket around in the Stream while a northeaster blew itself out. There were several interesting points to this decision. In the first place, it was nothing against *Mary's* seagoing qualities, for she scarcely noticed the swell. A cup of coffee sat on Hank's desk for an hour without spilling. But even a big schooner would have made slow work to windward that day. In the second place, there would be a lee under Cape Lookout with the wind in its present quarter and we should still be able to get in across the bar. But, — and this *but* is a big one — let the wind haul southeast and a vessel approaching Beaufort would be in a bad fix. The sea would be breaking too heavily to cross the bar and she would be caught on a wicked lee shore with no place to go. Not so good. Nevertheless Hank decided to risk it because we were anxious to make a quick passage, even ditch-crawling to Norfolk if necessary to avoid continued head winds offshore. For, all experts to the contrary notwithstanding, a small vessel *cannot* buck a northeast gale.



Our courses making Cape Lookout, showing how the error in the chronometer was discovered.

Accordingly we made sail and stood away on the starboard tack. For a while the wind favored so much that we thought it was going into the SE. We hauled her up about NNE and abandoned the Beaufort idea. But shortly before noon it backed sharply into the old quarter and began to blow for keeps. That looked bad for progress but good once more for Beaufort. We decided then that the ditch it must be, unless we wanted to spend five days riding out a gale. It was no occasion on which to be flub-dubbing along the beach.

Everything depended upon making a clean landfall and getting in, and that in turn depended on knowing our position. We got a good meridian altitude which placed us in 33° 54′ N. Lat. Crossing this with the longitude by account (still based on position B of the previous afternoon) I located the ship at E, as of noon April 10th. This seemed to check so nicely all round that we let her go NNW for the lightship without a second thought.

We had gone but five miles on this course when Hank, who had been studying the water, ordered the lead broken out. Coming up from lunch I saw the reason at once. As if by magic the water had changed from blue to green and the crazy seas of the Stream had given place to a regular North Atlantic swell. But according to my reckoning we were still close to the axis of the Stream. I could not understand it, but clearly something was wrong. And this became clearer still when the lead line quit running out at 22 fathoms. Where I had put her there were 300!

"Fill away and take a line of soundings," said Hank — or words to that effect. "We're slap on to the 20 fathom curve."

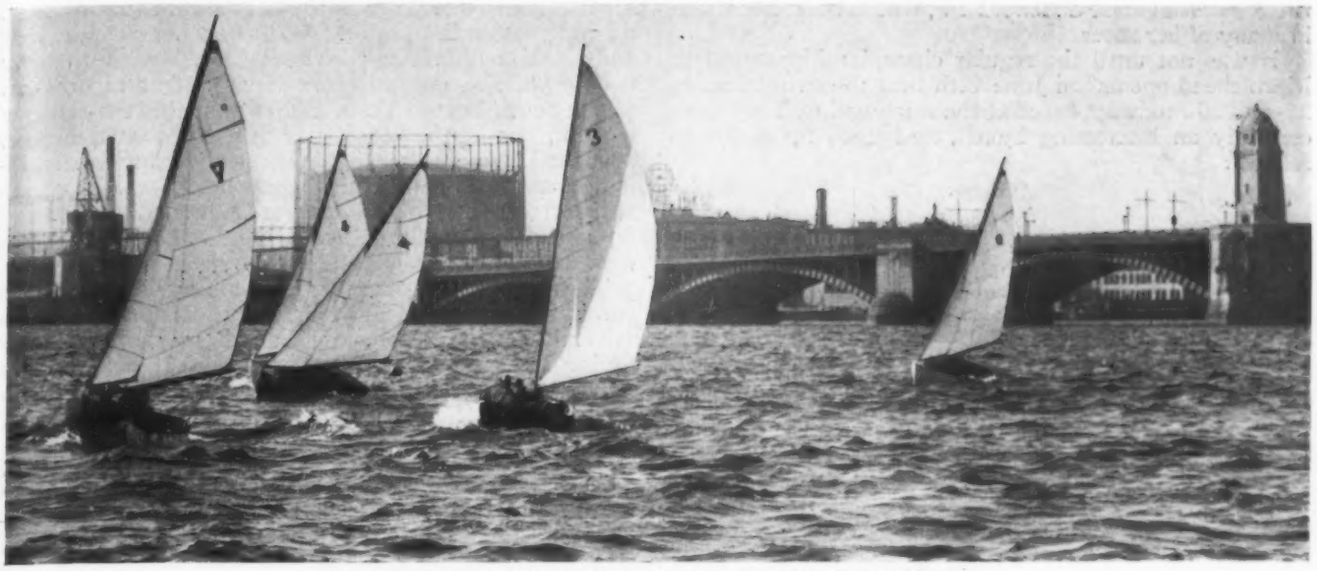
And now occurred an interesting thing. Several ships had passed outside of us the day before, northbound ships traveling like ourselves with the Stream. But now we saw one ahead *bound south*. I knew, of course, that she must be going down inside the Stream, but the full significance of her presence did not dawn upon me until we gained her wake. Then I saw Hank checking up her course by our compass.

He turned to me with a smile. "There's a line of position for you," said he. "Those fellows run from lightship to lightship going down the beach. Or rather, from Cape Lookout lightship to the lighted buoy off Frying Pan. Draw that line and cross it with your latitude. Then see where the 20-fathom curve comes."

Now look, if you please, at the chart. E_1F_1 is the latitude, corrected for the ship's run from noon. Observe where it intersects a line drawn to pass two miles outside the lightship and buoy. (I had noticed going south that the steamers gave them about that much of a berth.) Note where the 20-fathom curve comes and remember that our sounding, taken about a mile before we crossed the steamer's track, gave 22 fathoms. Could anything be more lovely? Here we had three lines of position which checked to a hair, and the fact that one of them was irregular made it all the better, for no other position would satisfy the sounding without violating the latitude and making the steamer pass *inside* the marks. To clinch the matter our next sounding, at *m*, gave 19 fathoms and a third one, at *n*, gave 18. It fell *right on top* of the figure 18 on the chart.

This was all very well, but it put the *Mary* some 30 miles west of the position I had given her, based upon the sights of the previous afternoon. When the sun reached

(*Continued on page 86*)



The Charles River Basin one-design class racing in the heart of Boston.

Yachting Season in Full Swing on the New England Coast

Many New Yachts and Classes Add to the Interest

By William Upham Swan

THE racing season in eastern waters opened auspiciously late in May, and again Marblehead set the pace with an impromptu event on May 29th in which 23 yachts came to the line in seven classes. The Memorial Day regattas at Marblehead, South Boston, Quincy and East Gloucester kept the ball rolling, and by the middle of June nearly all the Massachusetts Bay racing organizations were functioning, including the big fleet of the Beverly Yacht Club at Marion.

In the meantime the larger yachts were getting into commission, one of the first being Vice Commodore Lawrence's revolutionary schooner *Advance*, which set the staysail style last year. The *Resolute*, under her new colors, new masts and new rig, was launched at Bristol late in May, but was not given her trials in Narragansett Bay until "Nat" Herreshoff arrived back from the south two weeks later. The *Wildfire*, with double tracks on her foremast for her arrangement of staysails, left Neponset for the westward early in June.

The only missing member of the septette of racing staysail-rigged schooners early in the season was Commodore Nathaniel F. Ayer's new Dalmatian production *Lynx V*, whose launching in the Adriatic was delayed until nearly June 1. The Owen-designed schooner was sold to Commodore Ayer when about fifty per cent completed, and the Eastern Y. C. commander was hopeful that she would reach American waters late in June. Several Adriatic northers held back the work. She started on June 1st in tow of a freighter, but did not reach Gilbraltar until June 10th. By that time Commodore Ayer had about given up hope of having the schooner as his flagship on the Eastern Y. C. cruise and had accepted an invitation to hoist his blue pennant on J. Fred Brown's 80-foot schooner *Mariette*, a sister ship to the *Vagrant* and *Ohonkara*.

The entire major yacht fleet, the big schooners, the fifties, forties, thirties, and the Q Class yachts naturally headed toward the southern New England coast about the middle of June, with the Harvard and Yale regatta at New London as an interesting spectacle and the races of the New York Yacht Club off Newport the following week as the first test of their relative abilities.

The revival of yachting in the famous old Rhode Island port, which has so long been identified with the sport, was one of the most encouraging features of the preliminary season. The New York Yacht Club fleet arrived soon after the New London races and nearly all the big fliers sailed in the events of June 28th and 29th, and a number started in the Vanderbilt Cup Race round Cape Cod, four hours before dawn on July 1st. This was the first attempt ever made in major racing in this country to send a fleet of yachts off in darkness, although a waning moon helped a bit. The fleet will continue racing this month at Marblehead and on the Maine coast under the auspices of the Eastern Yacht Club. The same organization will stage major yacht events on July 17th, 24th and 31st and August 7th, which will fill in the season between the cruise of the Eastern Y. C. early in July and that of the New York Yacht Club in mid-August. With the *Lynx V* on the scene the races for the Astor and King's Cups this year for eight or nine staysail-rigged schooners and several "Marconized" Fifties should be the high line of the year for the larger boats. For these two races it is expected that the *Vanitie*, *Vagrant*, *Resolute*, *Wildfire*, *Flying Cloud*, *Advance*, *Lynx V*, *Pleione* and *Halcyon* will be contenders, all under staysails, the last two being old fifties rerigged.

One of the most pleasing announcements of early June was that Harry Payne Whitney had purchased the *Vanitie*, that Robert W. Emmons, 2nd, of Boston would be her manager, and that Charles Francis Adams, who sailed

the *Resolute* against *Shamrock IV*, would be at her wheel in many of her races.

It was not until the regular championship season at Marblehead opened on June 12th that the entire fleet of 25- and 20-raters appeared at the starting line. They were certainly an interesting bunch, and lined up about as follows:

Q Class

New Boats

Yacht	Owner	Designer
Falcon	E. M. and W. M. Abbott	Burgess & Paine
Hornet	B. Devereux Barker	Burgess & Paine
Hayseed VIII	Est. H. L. Bowden	Burgess & Paine
Nor'easter IV	Grafton Smith	Alden

Old Boats

Spindrift	J. V. Santry	Herreshoff
Sally XIII	L. F. Percival	Anker
Leonore	Robert Amory	Anker
Hawk	I. R. Edmands	Burgess & Paine
Nituna	S. Damon	Owen
Aquanno	A. W. Stevens	Owen
Sou'easter	Searle & Watson	Owen

R Class

New Boats

Mary	C. H. W. Foster	Anker
**Geflon*	C. H. W. Foster	Burgess & Paine
Rebel	J. J. Moebs	Burgess & Paine
Bonnie Kate	Dr. M. Prince	Burgess & Paine
Ruweida V	Sydney A. Beggs	Burgess & Paine
(———)	C. F. Adams	Burgess & Paine

Old Boats

Yankee	C. A. Welch	L. Francis Herreshoff
Ellen	C. P. Curtis	Burgess & Paine
Norseman	B. B. Crowninshield	Anker
Scapa II	G. E. McQuesten	Anker

**Rigged as a schooner.*

Three of last year's classes dropped out of the racing at Marblehead this season, the Marconi and gaff 18-footers and the handicap class. Two new ones were added, however, a bunch of eight 18-footers designed by Alden, and nine 15-footers designed by Burgess & Paine.

The Bar Harbor 31-foot class was also increased by the *Red Wing*, formerly the *Edjako* which George Lee purchased early in the spring. The other three boats which started in the Marblehead championships were A. W. Finlay's *Zara*, W. K. Shaw's *Indian* and W. K. Shaw, Jr.'s *Astrild*, formerly the *Vera III*. There were several additions to the Herreshoff S Class, the Manchester 17-footers, the Alden-designed O Class, the largest at Marblehead, and the juvenile Brutal Beasts.

The Marconi eighteens, however, were much in evidence at Cottage Park and South Boston, where yachtsmen who secured these well known racers during the winter, brought them out with new masts, rigging and sails and started them on an intensive season in upper Boston harbor. A majority appeared in the early regattas and in nearly every case the racing was close and exciting.

One of the new classes to appear in Massachusetts waters was a fleet of Cape Cod knockabouts which members of the East Gloucester Yacht Club secured late in June. The prompt availability of the modern stock boat was quite well brought out in this instance. The East Gloucester yachtsmen did not decide on the class until late in May, and inside of three weeks five boats had been delivered and seven more were promised for early in July by the Cape Cod Shipbuilding Co. of Wareham.

The East Gloucester yachtsmen have gradually acquired a dozen of the old Sonder boats, some of them twenty years old, and have found them wonderful racing boats still. Among the number is the *Vim*, which, sailing under the colors of Trenor Park, won the first German-American series in 1906. As the Sonders are a rating class, the proposition has been made to try them out next year under a Marconi rig and see how the designs of fifteen or twenty years ago would figure under modern racing gear.

The South Boston Yacht Club's annual Memorial Day regatta, one of the oldest racing fixtures on the coast, brought 33 boats to the line in six classes, the Sonders, 18-footers and "O" boats furnishing the best sport. The season also started on Memorial Day at Quincy, Wollaston and Squantum, in small one design classes. These clubs will race steadily until Columbus Day.

The spring racing of the little Back Bay fleet, which has furnished some excellent preliminary sport on the Charles River Basin in Boston, much on the same lines as the racing on the Thames and other English rivers, closed on June 20th after a series of twenty events. The contest between Grafton Smith's *Baby Nor*, Francis H. Cummings' *Chinook* and C. F. Batchelder's *Rocaba* was very close.

Racing in Buzzard's Bay started with the Memorial Day event of the New Bedford Yacht Club at Padanaram and on June 17th (a holiday in Massachusetts) the Beverly Yacht Club joined in the Bay sport, with the first of its fifteen championship races for all classes. It is fifty-four years since the Beverly Y. C. was organized by the late Edward Burgess at Beverly, Mass., and held its first regatta in Salem Bay. Seven years later, after many members had established summer homes in Buzzard's Bay, the club was divided into two sections and a few years after the club station at Beverly was discontinued. The organization in Buzzard's Bay retained the old name and in 1913 built a spacious clubhouse on Butler's Point, just above Marion and inside of Bird Island Light. It is off this station that the Beverly Club will hold its first Race Week on August 3d, 4th and 5th, and expects to start nearly a dozen of the New York Forties, with four score of other one-design classes, not only from the Bay, but from other ports along the southeastern Massachusetts coast, such as Wianno, Edgartown, Quisset and New Bedford.

In other Massachusetts ports the season awaited the arrival of the summer resident, Cohasset, Scituate, Duxbury, Wianno, Quisset, Chatham, Edgartown and Annisquam not getting under way until the last Saturday in June, and one or two not until Independence Day.

Organized yacht racing will be initiated at Cataumet, Barnstable, Harwichport, Cotuit and Salter's Point early in July. At nearly all of these new ports there will be one design classes, the boats at Harwichport having been secured last fall in Germany, while Bigelow, at Monument Beach, built a class of 14-foot skiffs for Cotuit this spring. Barnstable will have a mixed fleet this year, but next season will acquire a flock of Duxbury "Ducks," an Alden-designed boat built by Chaisson. Eight new boats of this type went to Duxbury in June, increasing the class there to over thirty.

The racing season in Maine starts very late, and except for the visit of the Eastern fleet the second week in July, very little sport will be in evidence until after the middle of the month. This applies particularly to the three yacht clubs at Mt. Desert, the North East, Seal and Bar Harbor organizations. At North East the fleet will number over forty sail this year, the largest in Maine. At Bar Harbor there will be five new Herreshoff S Class boats and eighteen Winslow-designed 16-footers, which Edsel Ford started two years ago.

The leading events among the cruising fleet in July on the New England coast are the two races of the 17th, both long distance affairs. One is the second annual gasoline and sail affair of the Boston Chapter of the Cruising Club of America, which starts from Gloucester shortly after sunrise for a trip around the Portland Lightship. The

(*Continued on page 90*)

The early morning washdown.
From a sketch by G. Zunini.

The Mate.
From an etching by George Gale.

The Clipper Ship *Young America*, from a painting by Charles R. Patterson.
Courtesy of Arthur H. Harlow Galleries, New York.

The Clipper Ship *Young America*

By F. C. MATTHEWS

THE world-famous clipper ship *Young America*, a painting of which, by Charles R. Patterson, is reproduced in this issue of YACHTING, was built at New York and left the ways in the shipyard of William H. Webb, on April 30th, 1853. Her model was that of the extreme clipper type, built to sail fast even at the expense of carrying capacity, speed being the prime necessity in ships bound to California with passengers and cargo, to which trade, expanding by leaps and bounds following the discovery of gold, the development of the clipper model was indebted. Mr. Webb had previously put afloat the *Challenge*, *Comet*, *Invincible*, *Gazelle*, *Swordfish* and *Flying Dutchman*, all of the same type as the *Young America*, although some had rather sharper bottoms and more hollow entrance lines. All of these were classed among the most handsome sailing vessels the world has ever seen. The *Young America* was the last out-and-out clipper built by Mr. Webb. She is said to have been his favorite. She was owned by George B. Daniels, of New York.

The *Young America* was 243 feet long on deck, 43 feet, 2 inches in extreme breadth of beam, and 26 feet, 9 inches depth of hold. She was 1,961 tons, old measurement; 1,439 tons according to the measurement rules of 1865; 1,380 tons per rules effective in 1883. She had 20 inches of deadrise at half floor. The reduction of 27 per cent from her original measurement to that of 1865 is evidence of her extreme model. The *Young America* had no figure-head, a billet substituting. The trail boards were ornamented with carvings of national emblems, done in colors. She was heavily sparred and was one of the loftiest ships afloat. In her prime she swung a 104-foot mainyard, while her spanker boom was 86 feet long. Under her original rig of single topsails she carried 60 foremast hands, and her whole complement was 75 men, there being four mates. She was subsequently equipped with double topsails, but during her whole sea life as an American ship she crossed three skysail yards. Her frame was very strong, being braced with a network of iron plates; while her cost was $140,000 — which represented a lot of money in those days.

From her launch, the *Young America* started as a racer. The *Sovereign of the Seas*, built by Donald McKay, having just returned from her first round voyage, made in very fast time, Messrs. Webb and Daniels offered to wager $20,000 that their ship would beat the Boston clipper in a race to San Francisco, but unfortunately the latter had been chartered for a voyage to England and Australia, so that the trial of speed could not be arranged. During her subsequent career, however, the *Young America* engaged in many races, in none of which was she ever beaten, and it was the boast of her masters that she was never "crawled up to," or passed at sea. A single run from San Francisco to Liverpool is said to have netted her backers as high as $40,000.

The *Young America* holds the record for the fastest passage from Liverpool to San Francisco, 99 days, port to port (96 days from Tuskar Light to port), made in 1872. In 1870 she was 82 days from San Francisco to New York, pilot to pilot, 83 days port to port. On this run she was 48 days from the equator, Pacific, to a similar crossing in the Atlantic, and 39 days only, from Cape Horn to Sandy Hook. Leaving Liverpool on April 18th, 1858, she arrived at Melbourne June 20th, a passage of 63 days, which is a faster run than was ever made by the *Lightning*, *James Baines* or *Red Jacket*, all ships with fully accredited fast records. The fastest passage of the *Young America* from New York to San Francisco, westward around Cape Horn, is 102½ days, yet a total of her best performances over the different sections of the course, during several voyages, is only 79 days. Space does not permit mentioning other records, or near-records, she made on complete or part voyages. She made 20 passages from New York to San Francisco, their average being 118 days. The average of her 20 passages from San Francisco to New York or Liverpool is 102⅓ days; there were 7 of 99 days or under, the average of these being 92½ days.

Shortly after her arrival at New York in October, 1883, from San Francisco, the *Young America* was sold for $13,500 and went under the Austrian flag as the *Miroslav*, her hailing port being Buccari. She was engaged in carrying case oil across the Atlantic and last left the Delaware Breakwater February 17th, 1886, for Fiume. She was never heard of thereafter.

An International Crew Race with Canada

AN event of unusual interest this summer will be a series of crew matches between the United States and Canada, to be sailed in the fast scow type of yacht now raced extensively on Barnegat Bay and popular for years on Lake St. Louis, Canada. These boats are about the fastest and liveliest racing craft of their size in the world.

On July 24th and 25th two crews from Barnegat Bay will sail four races on Lake St. Louis, near Montreal, against two crack crews of the Royal St. Lawrence Yacht Club, and on September 3rd and 4th two crews from the Canadian Club will sail a return match with the Barnegat sailors in their home waters in New Jersey.

The challenge of the Royal St. Lawrence Yacht Club for such a match met with enthusiastic favor and was formally accepted by the Barnegat Bay Yacht Racing Association. On July 10th the selection committee will name the two Barnegat skippers who are to represent the United States. About ten days later the two captains with their crews will go to Lake St. Louis for as many trials in the strange waters as time will permit.

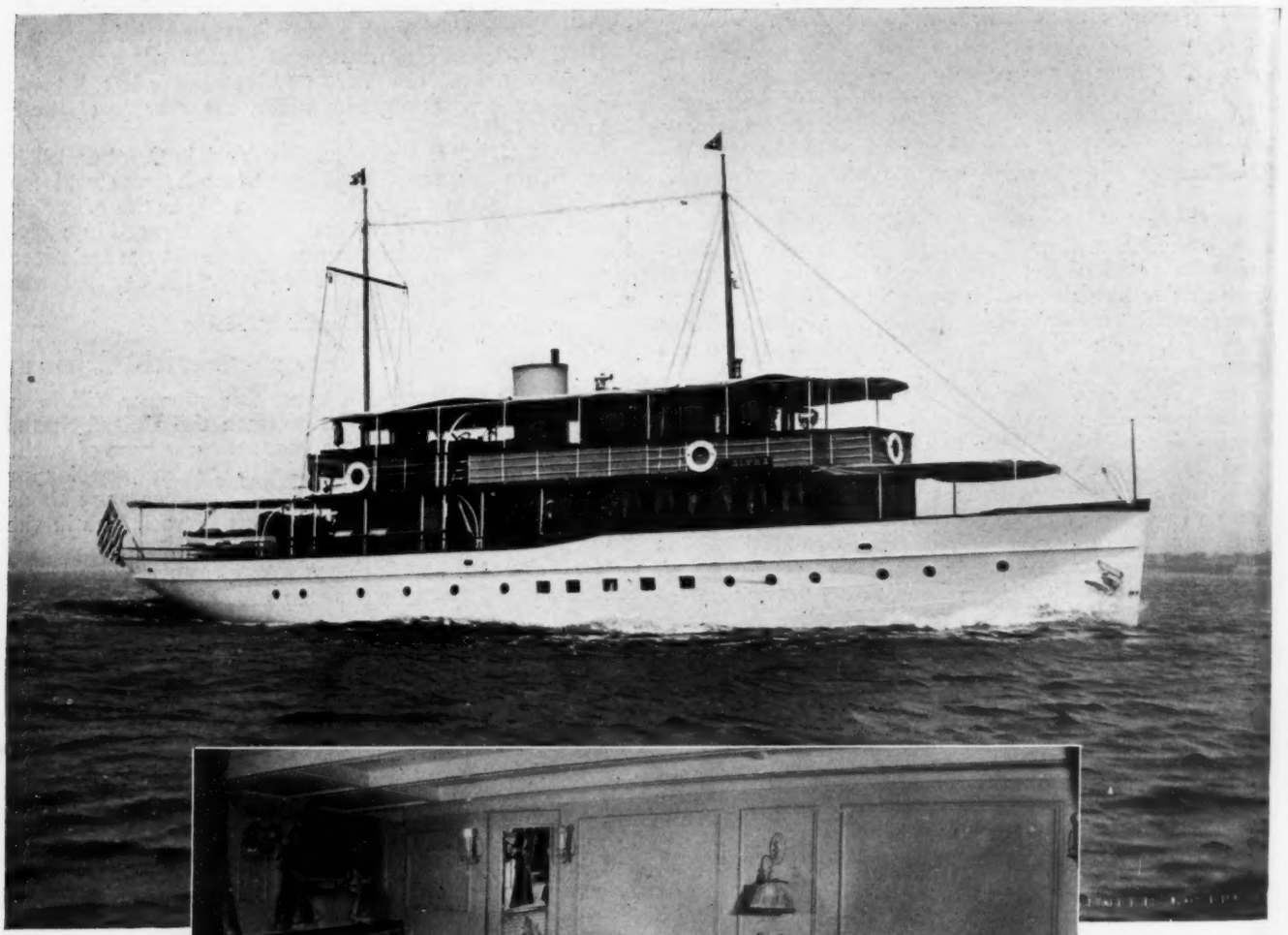
The races in Canada will be sailed in four boats of the Class B type which are 32 ft. overall, or 4 ft. longer than the Class E scows which are in use on Barnegat. The maximum allowable weight of crew is 650 lbs. in the Canadian boats and 550 lbs. in the Barnegat boats; this will mean that the crew of each boat in the Canada races will number four, while probably only three men will man the smaller boats which will be sailed on Barnegat Bay.

The series will be decided on a point score basis, 4, 3, 2, and 1 being given respectively for the four positions in each race. The Commodore of the Royal St. Lawrence Yacht Club has donated the trophy for the series. General opinion in quarters where the scow type of boat is known seems to be that the Barnegat sailors will be up against some very stiff competition when they meet the Canadians, although they may have some advantage in sailing the final races in their home waters, when the Canadians make their invasion in early September.

Trial races have been sailed between the Barnegat boats, as well as the regular scheduled races for the usual season championship, and the performance of the various skippers in all of these, as well as their showing last season, will be taken into consideration by the committee when making their choice on July 10th. There are twelve of the boats in the Barnegat class, including three new ones which arrived just before the opening of the season.

The New 100-Foot Diesel-Powered Yacht *Alpha*

A NEW 100-foot power yacht that will be seen on the coast this summer is the *Alpha*, a 100-foot steel, twin-screw Diesel-powered craft owned by George Marshall Allen, of the New York Yacht Club, and built from designs by Henry J. Gielow, Inc., New York City. with bathroom connecting. On the upper deck is another deckhouse containing a smoking room and pilot house. This upper deck also gives plenty of deck space for the owner and his guests. Below decks there are three large double staterooms, each with a separate bathroom, the



Top — 100-foot steel Diesel-powered yacht *Alpha*, owned by George Marshall Allen.

The owner's double stateroom on the *Alpha* is extremely comfortable and attractive.

Although she has all the characteristics of a yacht she embodies many of the features of a power houseboat, in that there is a large deckhouse containing a combined living and dining room and a large cabin for the owner owner's stateroom being ventilated by large square ports.

For power, the *Alpha* is equipped with two six-cylinder direct reversible Bessemer Diesel Engines which give a speed of 13½ miles an hour.

Interior Decoration for Yachts

Some Attractive Cabins in the Auxiliary Schooner "Speejacks"

Above is the redecorated main cabin and dining room. The *motif* is Chinese with red raised lacquer designs in gold and silver. The bulkheads are parchment color. The image of Buddha is one picked up by Mr. A. Y. Gowen on the round-the-world voyage of the first *Speejacks*.

Bottom Row, left. The double after guest stateroom of *Speejacks*. The furniture is done in old bone color with decorations in various shades.

Right. The owner's stateroom. The furniture effect is Venetian green background, decorated in old gold and rose colors.

Photos by M. Rosenfeld

Decorations by New York Galleries, Inc.

The Bahama Dinghy Sail

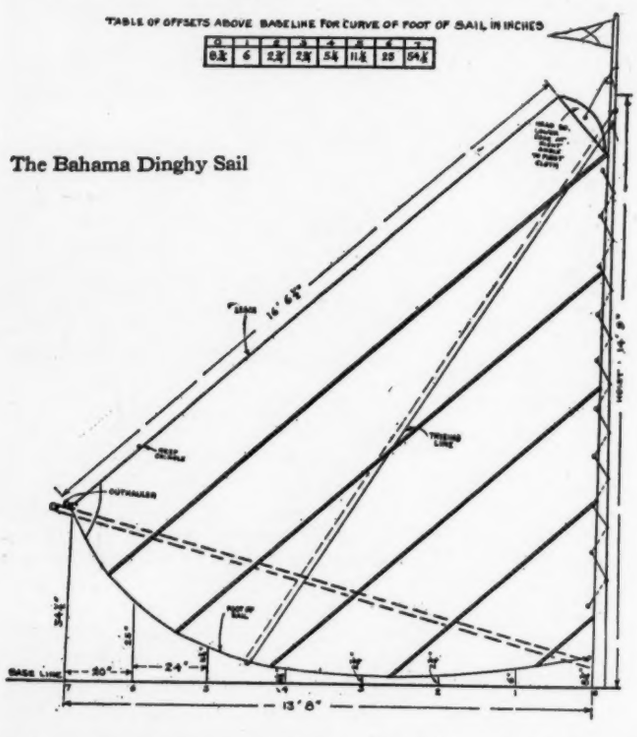
A Development of the Bermuda Rig That Has Proved Highly Efficient

AT this time, when the efficiency of sails is occupying the attention of yachtsmen as it never has before, a description of the Bahama dinghy sail should prove of interest. This sail is used extensively in the Bahama Islands for racing.

YACHTING is indebted to E. W. Forsyth, of Andros Island, for the scale drawing and for the following description:

"The Bahama dinghy sail is a local development of the Bermuda sail, which is the prototype of the Marconi. As it is an historical fact that many of the early settlers of the Bahamas were Bermuda colonists who emigrated there about 200 years ago, they probably brought this type of sail with them, as there has been little intercommunication between the islands in later days. It is also likely that the rig spread to the Chesapeake from the same source, though probably originating in Holland, from which country England derived much of her sea lore.

"The descendants of the old-time freebooters of the



The Bahama Dinghy Sail

Bahama cays have evolved a type of fishing craft that for its waters and purposes is second to none, and it was their development of the Bermuda sail which has brought the wonderful Bahama sail to such a pitch of efficiency and handiness, that, in small vessels, I believe it to be without a rival in the world today.

"I was not always of this opinion, and formerly thought that foreign sails, developed by the keen competition of generations of racing, must be superior to our own, and it was only after much experiment and study that I began to realise that a different principle was involved in the Bahama sail, that accounted for its superiority; for, if the rotund and buxom curves of the roached loose-footed sail were right for developing driving power, then the flattened curve of the sliding gunter, high peaked gaff, and Marconi sails, with hard-trimmed main sheet, must necessarily be wrong. It was then that I began to see that the power lay in the rotundity of the *lee side* of the sail, and also possibly in the strong incurve of the roach below the boom, which may cause the stream lines of air on both sides of the sail to exert a greater driving impulse.

"As I see it, some of the advantages of the Bahama over the Marconi sail are the following:

1. Much shorter mast for a given sail area, and therefore easy and secure staying of that spar, with much less strain on the hull.
2. Much lower center of effort of sail, with its natural corollary of less ballast or more sail for a given hull.
3. Minimum of twist in sail when close hauled, making it unnecessary to pull the main boom amidships when going to windward.
4. Broader head board and head of sail, giving a more efficient peak than the sharp Marconi jib-header, which, largely masked by the mast for the last five or six feet at the peak, must necessarily lose power from mast disturbance of windstream.
5. Less loss from mast disturbance of windstream, owing to the fact that the sail is laced to the mast, on which it revolves with every tack, making a far better wind flow to the *leeward side of the sail* at its leading edge, where most of the work is done.
6. Greater pulling power on the wind, owing to the sail being loosely hung from its after end to the end of the main boom, thus pulling, as does a jib, on a rope called the 'outhauler' but which is really analagous to a jib sheet in its action.
7. The sail being loose-footed, the curves of its lower surfaces remain unspoiled and symmetrical throughout, which is not the case with a sail whose foot is held straight by being laced to a boom.
8. Extreme simplicity of rig, and unrivalled handiness when reefing, which may be done by two methods: first, by what is known as 'scandalising' the sail with the lift line, taking away a large part of the area in a few seconds by the simple process of pulling on a rope; second, by regularly reefing with reef points, and gasketing the sail on the main boom with a single lashing at the reef cringle outhauler on the leech; or by a combination of both methods, in such emergencies as a sudden squall.
9. Superior efficiency *off the wind*, because the sail then assumes the shape of a spinnaker, and bellying from main boom end to mast, pulls with greater power than a flatter sail could develop.

"The principal disadvantage of the Bahama sail is that the helmsman is unable to see to leeward, and in close contact with other boats must depend, in a racing yacht, on the member of the crew farthest forward, or on hearing the wash from the bows of his opponents, in order to ascertain their position. In racing sails it is customary to almost completely fill the space between the boom and the water, and this seems to be quite important.

"The duck used in sails of this type is much heavier than that used in Marconi or gaff reaching sails, 10 oz. Army duck being most favored here for dinghy sails such as described above. It is not bighted, but worked full width, and makes a light, smooth sail because there are few doublings of the cloth and no battens. It would be a great mistake to use light duck in one of these sails, and the roping, especially on the foot, should be heavy."

Henry Howard, Organizer

A Personal Sketch of the Owner of "Alice"

By WINFIELD M. THOMPSON

CAREFUL reading of the interesting series of articles by Henry Howard published in YACHTING last winter, describing the designing, building and testing under cruising conditions of the auxiliary ketch *Alice*, leads directly to the conclusion that the author has a genius for detail. If there are any particulars regarding his boat that he did not set down in concise and understandable terms, they may be considered immaterial.

In an acquaintance with Mr. Howard extending over a period of 23 years, I have observed many times his capacity for taking pains, which, some philosopher has told us, is a chief attribute of genius; but I have also seen other and broader traits in him that I think may interest the readers of his articles. It does not always follow that a man with a gift for detail is equally gifted in other directions that make for success in his daily life. Conversely, I have seen great captains of industry, bankers, financiers and the like, who could not have put together the necessary data for a personal directory of their most frequently used telephone calls. Henry Howard is unlike them in that he has capacity for doing things both great and small, and doing them with equal thoroughness. As an organizer I have never known his equal. He rides down all obstacles. He makes use of every circumstance, and every individual that can possibly be helpful to him; and in achieving some of his successes, I have seen him turn to account material, both human and otherwise, that seemed at first hopelessly unpromising and apparently useless to anyone.

Henry Howard, on board *Alice*.

Mr. Howard's methods are an interesting development of his training and personal traits. He is the original settler from Missouri, so far as taking anything for granted is concerned. He tests every statement made to him, every situation in which he finds himself, every fact of life, like a biologist or a chemist in his laboratory, which perhaps is quite natural, since he is a chemical engineer by profession. He looks through statements, figures, arguments, opinions, motives, as an X-ray machine looks through solids. When his test is finished, he is ready to discard what he considers waste, and proceed sure-footedly to his own conclusions.

This habit of thoroughness was reflected in everything he did in connection with the *Alice*. It seemed quite in order, therefore, for him not to accept the engine builder's statement as to the horse power of the machine he wanted for his boat until he had employed the Bureau Veritas to make a test of it. No reasonable manufacturer could object to such a sensible proceeding. Yet few of us consider it due ourselves to be so thorough in buying an engine.

Quite as a matter of habit, Mr. Howard says little about himself. It is therefore a pleasant duty to accept the editorial mandate to write something about him as I have seen him in an association of something more than two decades.

I owed my first meeting with Henry Howard to his interest in the literature of the sea. It was in 1903. I had just finished preparing a history of the *America's* Cup, a copy of which had come to Mr. Howard's attention. At that time he had recently taken up the task of popularizing the racing and cruising programs of the Eastern Yacht Club, and was casting about for material that might be shaped into a program of entertainments for the season. It having occurred to him that I might be able to talk passably, as well as write on the subject of yachting, he sent for me, and asked if I would like to give a talk before the members of his club. It chanced that I had recently purchased a set of lantern slides dealing with the subject of the *America's* Cup, and these I placed at his disposal. It was agreed that I should show the slides, and give an accompanying talk, on board one of the Eastern Yacht Club's vessels, on the occasion of a week-end run to Gloucester.

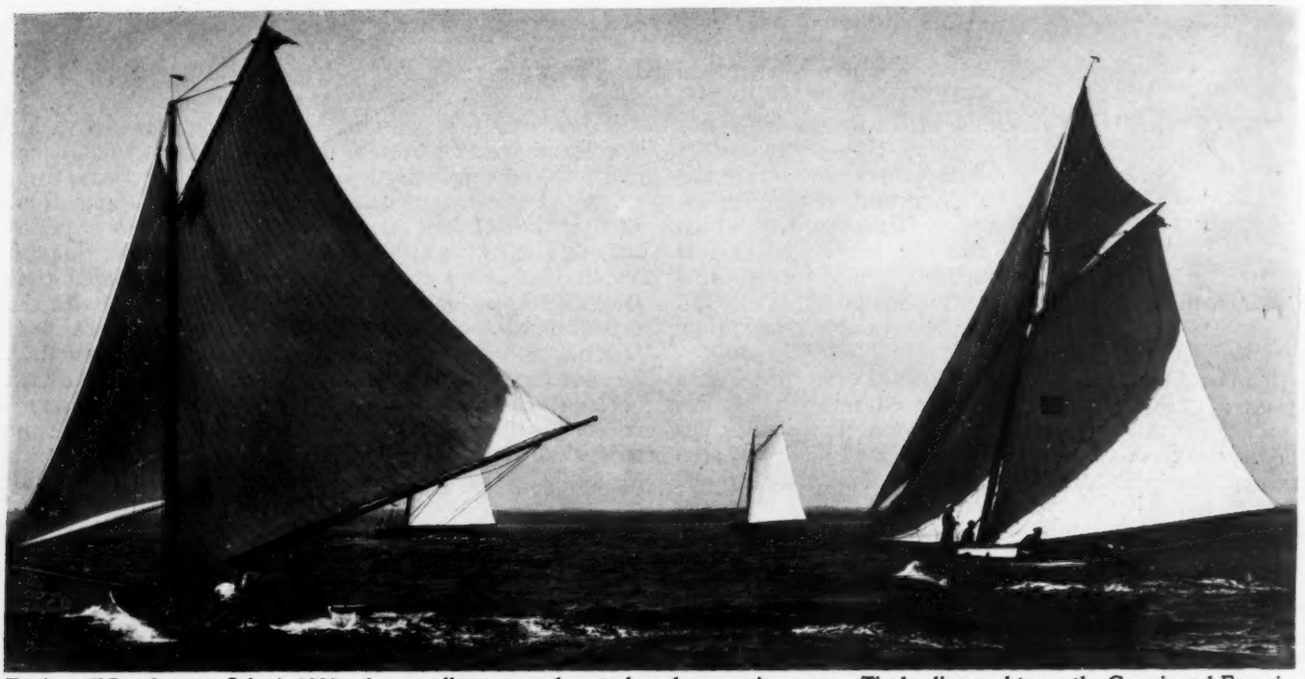
On the appointed day I reported at the Eastern Club-house on Marblehead Neck, and was taken on board the schooner yacht *Hoosier*, owned by Colonel William R. Nelson, owner of the *Kansas City Star*. The *Hoosier* was a glorified Gloucester fisherman, big and powerful, and was then in her first or second season. Her owner, a genial, hearty middle-Westerner, was on board, and greeted me cordially, inviting me to spend the week-end with him. That evening, after the fleet had anchored in Gloucester Harbor, I rigged up my projecting lantern and sheet on the starboard side of the *Hoosier's* deck and prepared to do my stuff.

The lecture went off very well. The next day the *Hoosier* cruised offshore, running before a light northerly wind until the land was left behind, and then jogging about until nightfall, while Colonel Nelson and his guests loafed in expansive luxury. On our return to Marblehead that evening, Mr. Howard presented me with one of the club racing cups as a souvenir of the occasion. I have it now, and while the circumstances of the lecture mean little in themselves, this reminder of the event has a double significance, since it marks the occasion of my meeting Henry Howard, which proved a turning point in my life.

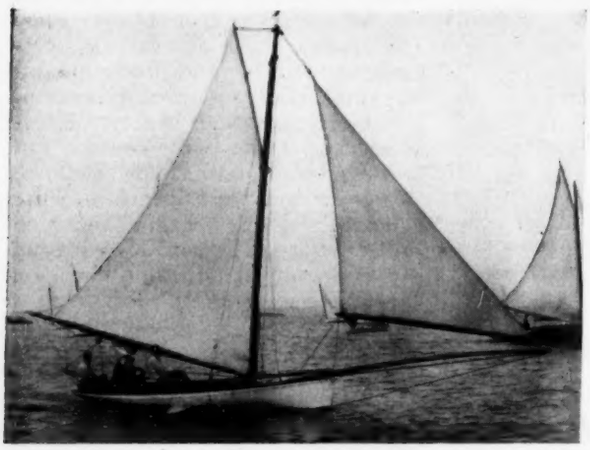
In years that followed I had many yachting contacts with Mr. Howard. Through the position I then held, as yachting editor of a leading Boston newspaper, I was able to assist him in his work for the sport. I was also in a position to observe and note his sporting activities. These were varied, and successful. He drew the Eastern Yacht Club out of its position of reserve, and made it known to and appreciated by the public. He built up the club's racing and cruising fleets. He inaugurated, single-handed, the first international team races between small yachts, the Sonder Class series of 1905. The story of the many months of planning, the many interviews, the many moves in the game of diplomacy necessary to bring about this event — destined to usher in a new era in interna-

(*Continued on page 94*)

Yachting in the Roaring Eighties



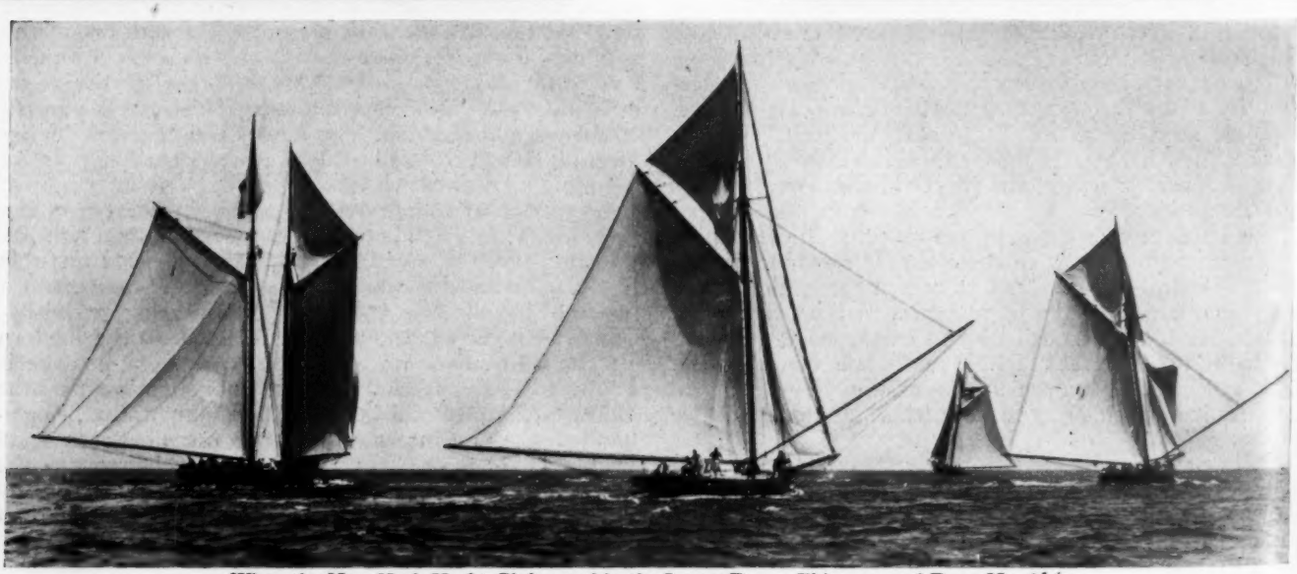
Racing off Larchmont, July 4, 1883, when sandbaggers and centerboarders were in vogue. The leading yachts are the *Gracie* and *Fannie*.



Left—Bryan Alley's *Cruiser*, a famous racer of the Eighties.

Right—The sloop *Fanny*, preparing to break out spinnaker.

Photos by Edwin Hale Lincoln



When the New York Yacht Club raced in the Lower Bay. Jibing around Buoy No. 8½.

Close work at the mark! Regatta Day at Auckland, New Zealand. The skippers in the Antipodes evidently run into a jam as easily as they do here.

The Month in Yachting

INTEREST in the opening of the season on Long Island Sound centered in the 20-rater class, to which three new boats have been built, and in the Sound Inter-Club Class, a one-design class to which 28 yachts, 19 feet on the water line, have been turned out. Both these classes were "going strong" during the early part of the season.

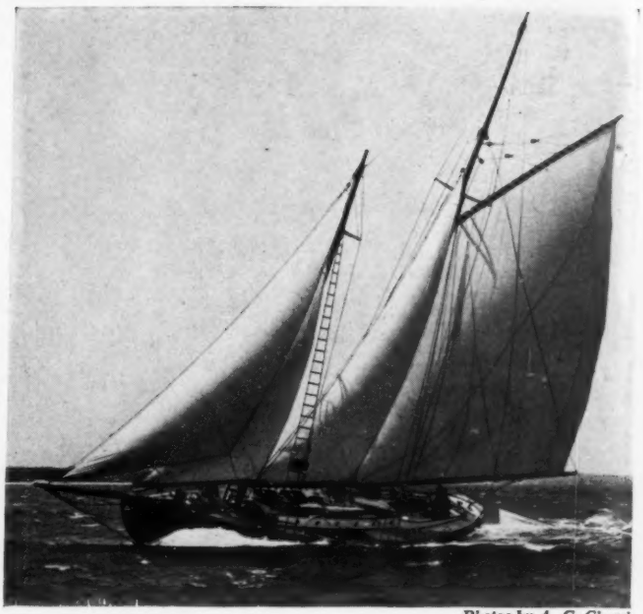
The new R's are the *Ardelle*, owned by Donald H. Cowl, from designs by C. D. Mower; the *Grayling*, a Herreshoff-designed and built 20-rater owned by Junius S. Morgan, Jr., and the *Bob-Kat*, owned by Robert B. Meyer and designed by Henry J. Gielow, Inc.

Ardelle was the first out. She is a long narrow boat and showed well in her early races. It is too early yet to tell her strong points or to judge her capabilities, but she moves easily, gets started quickly and won two out of her first three races. The *Grayling* has shown speed in her early races. She is a very long water line boat measuring 27 feet on the water and 43 over all, but in her hull form she shows none of the extreme features of some of the other recent R's.

At this writing the *Bob-Kat* has only made an appearance in one race, but in that one she made a most favorable impression. Although she had just arrived from her builder's yard the night before, she finished fourth in a fleet of nine yachts, sailing in a fresh easterly breeze and a jump of sea. In unofficial trials against some of the other R's she gives the impression of being a boat that will be hard to beat. She is not extreme in any way, being about 25 feet on the line and 7 feet 4 inches beam. All three of the new 20 raters are fine looking craft.

The new 20-rater *Bob-Kat*, owned by Robert B. Meyer and designed by H. J. Gielow, Inc.

The *Grayling*, Junius S. Morgan, owner. She was designed and built by Herreshoff.



Photos by A. C. Church

Testing the staysail and gaff rigs on yachts of the same design, *Marilyn* (left) and *Tigress* (right). Both yachts were designed by Wm. H. Hand, Jr.

Test of Staysail and Gaff Rigs for Schooners

AN interesting comparison of the staysail and gaff foresail rigs for schooners was made on Buzzard's Bay, on May 23 and 24, by William H. Hand, Jr., when two schooners from his design, the *Tigress* and the *Marilyn*, identical as to hull, but one rigged with the conventional gaff foresail and the other with the new staysail rigs between the masts, were tried out against each other. It was the first time a test of this kind has been held between similar yachts in which the rig itself has had a chance to show its merit in equal conditions, as near as can be had. Unfortunately, it blew too hard both days to make the test conclusive, as the *Tigress*, with her staysail rig, could not carry her kites.

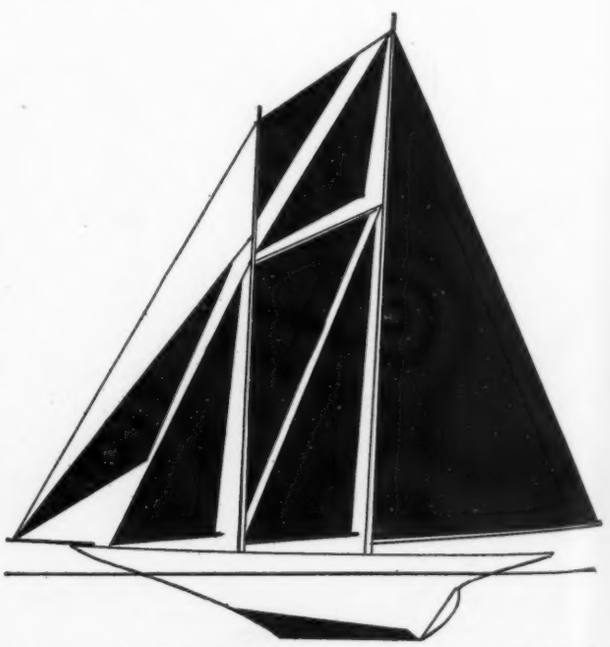
A stiff breeze was blowing when the two left their anchorage at Padanaram. The wind was too strong for topsails, and both yachts set four lowers and stood outside to feel the strength of the breeze, which came off the land in vicious puffs that stretched out the new rigging and drove the schooners along rail down. The slackened rigging made it impossible to trim headsails as well as could be desired, but under such conditions the yachts had an excellent chance to compare their relative speed.

As was demonstrated last season by *Advance*, which proved a wonder when sheeted in flat on the wind, *Tigress* proved a slippery customer, and from all indications her main staysail enabled her to point closer and foot faster than her sister schooner. Whenever the two sheeted in the *Tigress* went faster and pointed higher, regardless of how hard it blew, and the staysail seemed to have plenty of drive to it when close hauled. Running off the wind the *Marilyn* had the best of it, and this seemed to be the case whenever they swung off together.

In this respect she had an advantage in sail area as her foresail filled the greater part of the area between the two masts, while the staysail on *Tigress* is considerably smaller, and it was blowing too hard to carry her main topmast staysail above it. This comparative result under actual conditions which might be called as nearly standardized as possible is, therefore, inconclusive, yet it apparently bears out the claims in favor of the staysail which have previously been made.

Whether or not the increased speed to windward and the ability to point closer is sufficient to offset the advantage of the older rig down the wind remains to be proved, but the new rig is yet in its undeveloped state amd doubtless can be improved. "Nat" Herreshoff's contribution in this respect, which is embodied in the *Resolute's* new sail plan, may help solve the problem, and W. Starling Burgess is said to be experimenting with another modification which may be seen before the present season is over.

There is still another angle which bears on this problem, and that is that a yacht carrying the staysail rig should not run dead before the wind, but reach to leeward instead and keep all her canvas drawing. It is not always how much sail you are carrying which gives the most efficiency when running off the wind, but how much is drawing, and how near the yacht is to her sailing lines.



The new sail plan of the *Resolute*, the last America's Cup defender, now owned by E. Walter Clark.

Rainbow III, a new 62-foot Consolidated cruiser, built for R. P. Joy, Esq., of Detroit. She makes 23 miles an hour with two 180 h.p. motors.

Star Class Favorites Defeated in Early Races

THE active racing season has now started in the majority of the Star Fleets in North America. While only those in the South are as yet sailing their eliminations for the Internationals, the spring series in other Fleets have shown the most surprising results.

Despite rain and fog, 13 yachts started in the opening race on Gravesend Bay, thereby putting to shame the veteran Western L. I. Sound Fleet only a few miles away which hugged the fireside and made no attempt to brave the unseasonable weather. "Tim" Parkman, sailing the *Movie II,* defeated the *Sonny II* sailed by Inslee, veteran skipper and twice winner of international championships of the past. That was the first surprise.

On Narragansett Bay, George Armitage sailed his *Ibex* to a victory in the spring series over none other than Comstock and Gidley's famous *Rhody*. George Armitage, it may be remembered, was the local champion in 1922, and this is the first time since that he has shown signs of a comeback.

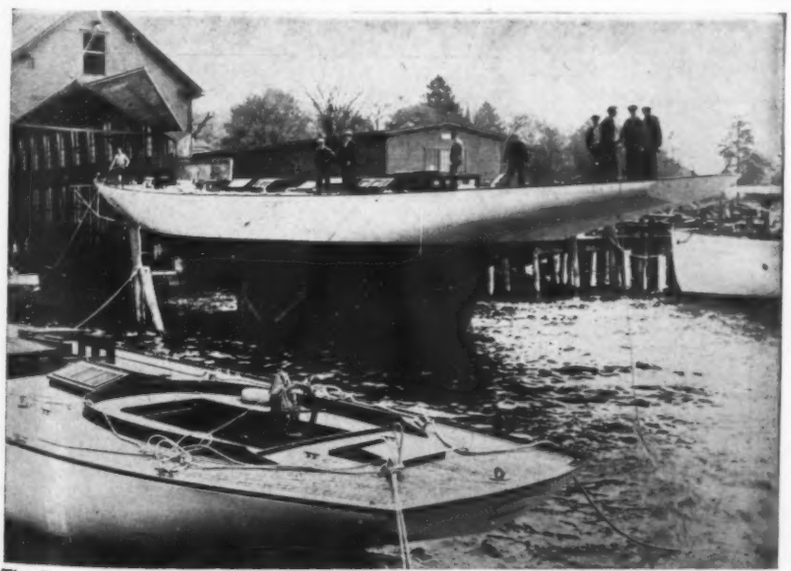
Dona Bertha, owned by Raymond Griffith and Harry Fisher, the skipper, leads the spring series at Los Angeles by a big margin with three firsts and a second. Rey Schauer and the *Movie Star* are sailing in third place only.

At New Orleans, where the actual eliminations have begun, it was thought that Hayward, who made such a fine record at Havana last January, would be an easy winner, but again, contrary to all expectations, Earl Blouin has been batting 100 with his *Talita*, having won the first three elimination races and practically clinched the right to represent the Fleet again this year, while Hayward and the *Jane II* are far down the list.

The *Guincho*, sailed by F. Villapol, defeated *Resbaloso*, sailed by Commodore Silva, in the spring series of the Cienfuegos Fleet.

J. Rulon Miller took the opener on the Chesapeake with the *Shark*, while his wife won third place sailing the *Dolphin*. Mrs. Miller sails a very remarkable race, as she has for over a year been beating many of the men on the Chesapeake. The Chesapeake Lipton Trophy will be raced for on August 7th, one race only. It is open to all yachts of the Star Class certified to by the Association.

Enjoying opening day at the Larchmont Y. C. Vice Commodore Henry L. Maxwell and Rear Commodore J. B. Dunbaugh.



The *Resolute*, with a new stern and converted to a schooner, sliding down the ways at the Herreshoff plant.

Nautical Nuggets

Part V—Some Valuable Pointers on Working the Tides to Win Races

By WILLIAM W. SWAN

IN the June issue of YACHTING, I spoke of tides and the value of knowing their eccentricities. I have had several arguments with various yachtsmen since writing about tides and eddies, which prove to me that less consideration is given them than they should receive. Therefore, it seems a wise move to enlarge on the subject and at the same time prove the importance of tides by naming a personal experience or two which would show more clearly why this hazard in racing should be studied by every skipper who has the ambition to be classed as A1.

The importance of tides and the ever-attendant back eddy was first brought home to me by Will Stevens of Bayville, L. I. When I was a boy of ten or eleven years, it was my privilege to be one of the crew of his oyster sloop, the *Louisa N.* To earn that privilege, I used to help as best I could during the busy week of dredging or planting seed oysters. My pay, and no one was more proud of receiving it, was to occupy a corner of the deck on Sunday during the regular sweepstake race.

There were sometimes as many as twenty starters in these races, which were for $5.00 per boat, winner take all, and, please, believe me when I tell you that no glistening mahogany yacht ever was groomed more assiduously nor raced harder than those ugly oyster boats!

The race always started just outside the Bayville Creek entrance toward Center Island from the present bridge leading from Bayville to Oyster Bay. The course hardly ever varied, and was extremely tortuous and long, from Bayville around Center Island to Norwalk Light, and return. The only rules were that you must pass on channel side of all Government buoys.

They used to start this race at 10 A.M. The line was about fifty yards long, marked at each end by oyster stakes. One of the Nicholson boys fired a "Fourth of July" cannon on the beach to give them their warning and starting signals. Right here I was to learn the importance of knowing the waters in which the race was being held.

Oyster Bay being a large, deep bay, emptied its waters into the junction of Cold Spring Harbor and the Sound through a rather narrow entrance, which naturally meant an accelerated speed of flood or ebb tide. If the tide was ebbing at the start, there would be a battle to keep in the fastest part of the current and at the same time keep a clear wind. The high hills surrounding the bay right out to Lloyd's Neck made it imperative to keep away from the beach, especially in the usual sou'wester.

The long, tedious run to the Light over, the real battle of seamanship and local knowledge commenced. The fleet would split as a rule, half taking the starboard tack right across the Sound, getting behind the point out of the tide setting east. They would run out around the bell on the point and then again take the starboard tack right into the beach.

This is where the skipper would use his lightest passenger. My job was to go for'ard, out on the bowsprit, if it was light weather, and call out when I saw the bottom or a rock. Being all centerboard boats, they could scrape the beach without doing any harm. They would hug this beach up to the point where the strong tide was encountered, and then stand across it to slack water before again taking the starboard tack and running for the buoy in the harbor.

The boats which split always took a long port tack up the Connecticut shore, evidently figuring on "leebowing" the tide out of Stamford Harbor, and then a long starboard tack across the Sound, endeavoring to hit the slack water in the lee of Center Island. Sometimes these boats, favored by a steady breeze, would gain by this maneuver.

Here, the real "tide hounds" would be called into play. Some would sneak up behind the sand point just to the eastward of the Seawanhaka Yacht Club, and some would shoot right across the tide to the eddy in front of the high sandy bluff that separates Cold Spring Harbor from Oyster Bay. The ones that sneaked around the sand point would skirt the beach past Seawanhaka and keep close to that shore up to the point opposite the town of Oyster Bay. From there to the finish, the head tide diminished in speed, but they still would work the eddies along the beach to the inner bay and then run for the line.

One has no idea how a half minute of "lift" will benefit

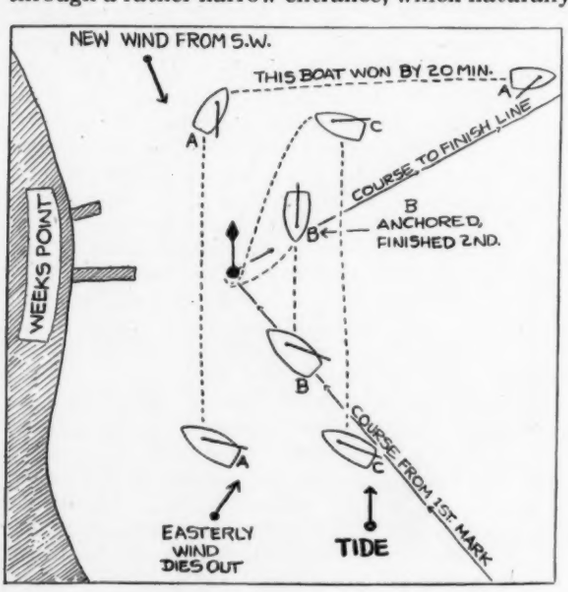
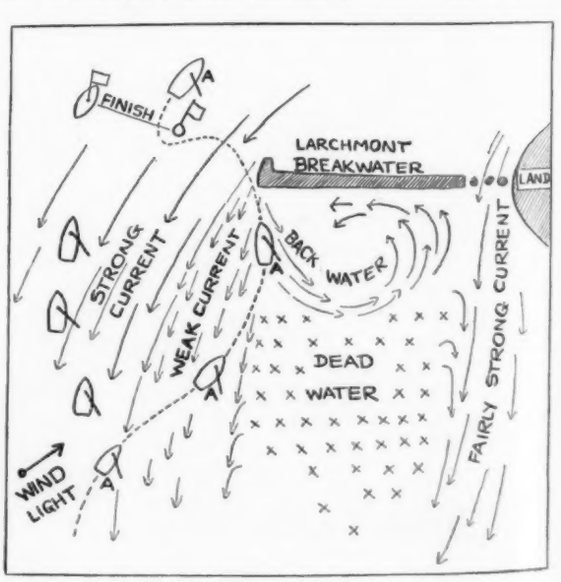


Diagram No. 1.—Left.

Diagram No. 2.—Right.



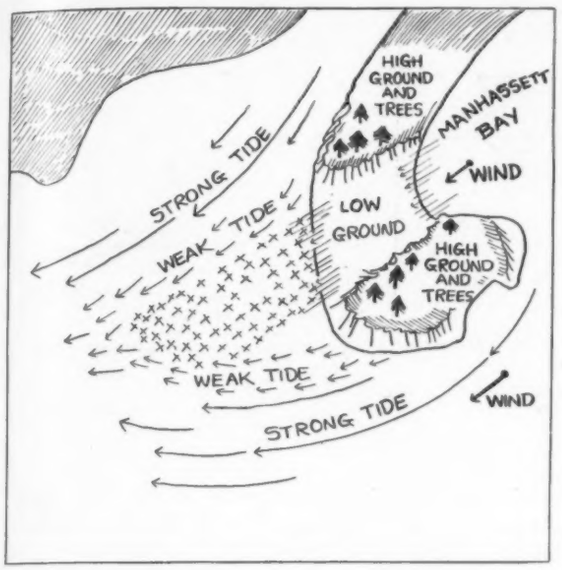


Diagram No. 3. — Left.

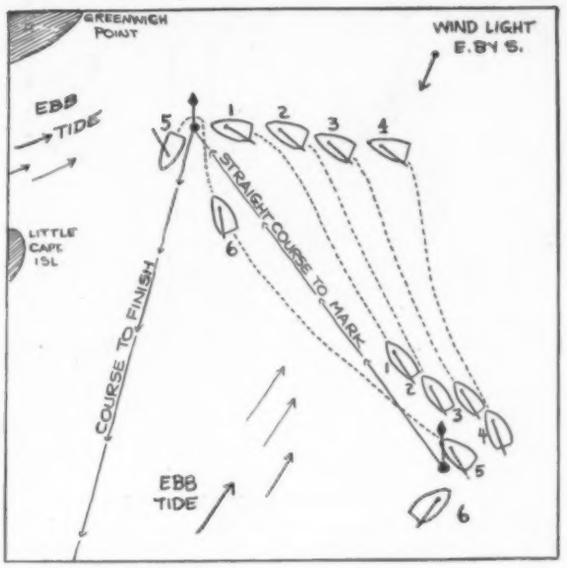


Diagram No. 4. — Right.

one until they see it done by these expert baymen. I have seen the boat with the most daring skipper go two feet to the timid skipper's one just because he dared take a chance and go in a little closer than the other fellow. If he was too daring, and hung up on a shoal or rock, all hands would go for'ard or aft and with the help of poles get her going again, but it usually meant the loss of the race.

In these days of keel boats, even in the tiniest classes, one cannot take the same chances as did the baymen in their shaol draft, centerboard, heavily built craft, but, on learning of the value of working these tides and eddies, and learning where they are and how to take advantage of them or minimize their disadvantages, you will find sooner or later that it pays to give some time to this problem.

For instance, I remember a race won in a peculiar manner by a boat whose skipper either intentionally or unintentionally so placed his craft that, with the wind dying out to a flat calm, he drifted past a racing mark on the *proper* side while his opponents drifted up to it on the *wrong* side and then either had to anchor or drift on past it. (See Sketch I.)

Take another instance, just as simple as this first illustration. (See Sketch II.) Tide ebbing. Wind, just a breath from the S.E. Only thirty minutes to go before the time limit for the class was up. There were four or five N. Y. Y. C. 30-footers between Scotch Caps and the finish line off Larchmont breakwater.

One boat (A) whose skipper knew the water and the action of the current finished in time to qualify for the prize! He did this in spite of the fact that he sailed a longer course than the others. He worked against less tide than the others.

A third and rather an interesting illustration combines both a wind-hunting and tide-avoidance condition that has won many a race. I have in mind the courses sailed by yachts entered in the New Rochelle Y. C., Huguenot Y. C., Harlem Y. C., Manhassett Bay Y. C. races, so you see it is used several times each season and the same conditions as those mentioned are almost sure to be met during the four months of racing on Long Island Sound.

These clubs all use a triangular course with either Scotch Caps bell or a special racing spar off Rye Point on the first leg. The second leg crosses the Sound to either Weeks Point buoy or Buoy D *2* in Hempstead Harbor, thence to finish.

Take this course with ebb tide and S.W. wind. (Sketch III.) Here it makes no difference whether the wind is weak, medium or strong, there is a land formation and tide condition where the skipper can, provided he knows the spot, gain a distinct advantage over opponents who do not.

The wind comes across Sands Point from Manhassett Bay over the lowest part of the land and blows true and steady through a lane about three-eighths of a mile wide out into the Sound.

The deep channel tide flows east from Prospect Point and converges with the heavy tide from Hempstead at Matinicock. In between is a triangular shaped stretch of *slower* moving water. It sets east, but not as strong as the outside edges.

On the windward leg, therefore, it is wise to try and find that "wind funnel" and slack water. The boat that gets into it will invariably gain on others which go toward Execution or Matinicock.

On May 29, 1926, a tidal lesson was taught to those members of the Sound Interclub class racing in the Riverside Regatta off Great Captain's Island. On the second leg of a triangular course with the wind light, southeast to east, and an ebb tide, six of these little boats rounded the first mark and headed for the second.

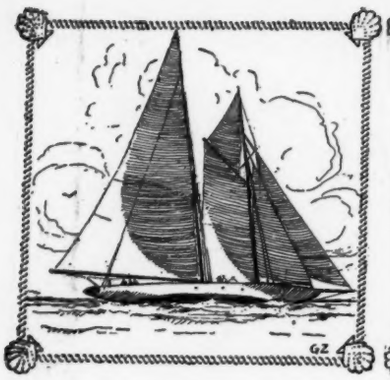
There were three in the lead, about thirty seconds ahead of the fourth and fifth boats, which turned together, and the sixth some seconds after. These boats were so placed that the fourth boat had to stay to windward of the wake of the three leaders in order to avoid backwinding. The fifth, sailed by Corny Shields, and the sixth, sailed by Sam Wetherill, headed off the course to the westward.

As the mark was approached, the heavy tide out of Indian Harbor and Riverside was met and the three leading boats (plus their victim right astern) were steadily swept to the eastward, which forced them to ease sheets and run instead of reach to the turning point. Shields and Wetherill, who had assumed a broad reach at the beginning of the leg, proved the strategy of playing the tide.

From their position to leeward of the four leading boats, they *reached* up to the mark with the tide under them, Shields turning first from fourth position and Wetherill turning a close fourth from sixth position.

The boat which was fourth but which, because of the position of the leaders and other craft had to stay to windward, turned the mark in seventh place.

This is a clear indication of the importance of tides in racing along the coast, and the writer wishes to impress on all ambitious skippers the fact that many races, especially in light weather, are won by that man who bears *tides* in mind.



Yachting

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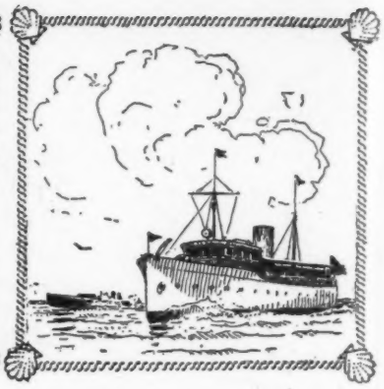


Editorial

Off on the Bermuda Race

BETWEEN the time this issue of YACHTING goes to press and its publication, the Bermuda Race for 1926 will have passed into history. The big fleet that is already gathering at New London will have taken its departure from Montauk, six-hundred and sixty miles of tumbling sea will have been covered, and the winner will be known. What is in store for the contestants in the way of weather, who will get the breaks and who will feel the thrill of victory, cannot be foretold. The most we can do at this writing is to wish the skippers and crews fair winds and a fast passage and to hope that the best sailed boat wins.

The fleet this year is the best, in point of seagoing quality, that has ever made the run to the land of onions and lilies. It is made up of more nearly the type of yacht for which the race was organized than in any previous year. All of the yachts going were built to stand the gaff off shore. There are no yachts of the conventional racing type among them, though most of them were built with a view to speed as well as seaworthiness. This is as it should be. Speed is as much a desirable element in a seagoing craft as any other quality, if it is not obtained at the expense of seaworthiness. To design a craft that will stay on top of the water is, if she is properly built, not so much of a trick. To design one that will not only stay on top, but will go in the desired direction, reach her destination in the shortest reasonable time, be easy on her crew and gear, and handle under any conditions, is the aim of every naval architect. The Bermuda Race has, unquestionably, contributed much in the last four years towards the designing and building of better all-round craft for off shore work, and in the developing of sailors to handle them. In the 1923 race it was hard to man the fleet with those who had any sea-going experience under sail. This year, skippers had no difficulty in signing on all the hands they wanted who had made at least one passage to the Islands in previous races. Which is as it should be.

The Feat of the *Jolie Brise*

The interest in the Bermuda Race this year is greatly heightened by the entry of a British yacht, the cutter *Jolie Brise*, which, unheralded and quite unexpected, dropped anchor in Larchmont Harbor a few weeks ago after sailing some 5800 miles on her trans-Atlantic passage, with the announcement from her owner, Lieut. Commander E. G. Martin, O.B.E., that he had come to sail in our ocean race. The whole manner of this most sporting undertaking was typical of her modest, unassuming skipper.

It has been many years since any British yacht has been sailed across for racing on this side, and still more years since we have seen a yacht of this type in our waters. Elsewhere in this issue is a description of the *Jolie Brise*, which also tells of the care and thought which went into her outfitting for this long passage. Both the preparation for and the execution of her voyage stamps her owner as a real sailorman.

Commander Martin chose the southern route for his crossing. In this he was wise, as he carried a fair wind for most of the 47 days required for the passage. In a talk to the members of the Cruising Club the skipper of the *Jolie Brise* said that for 3,500 miles he ran under squaresail and raffee, averaging some 150 miles a day, a most creditable performance.

Last year the *Jolie Brise* won the Fastnet Race in British waters. She will in the Bermuda Race, however, meet a more modern fleet, in which most of her competitors will have less displacement and, possibly, easier forms to drive, and yet capable of hard driving in a breeze. The result of this matching of types will be watched with interest. After the finish at Bermuda the *Jolie Brise* will sail for home, where she will again enter the Fastnet Race.

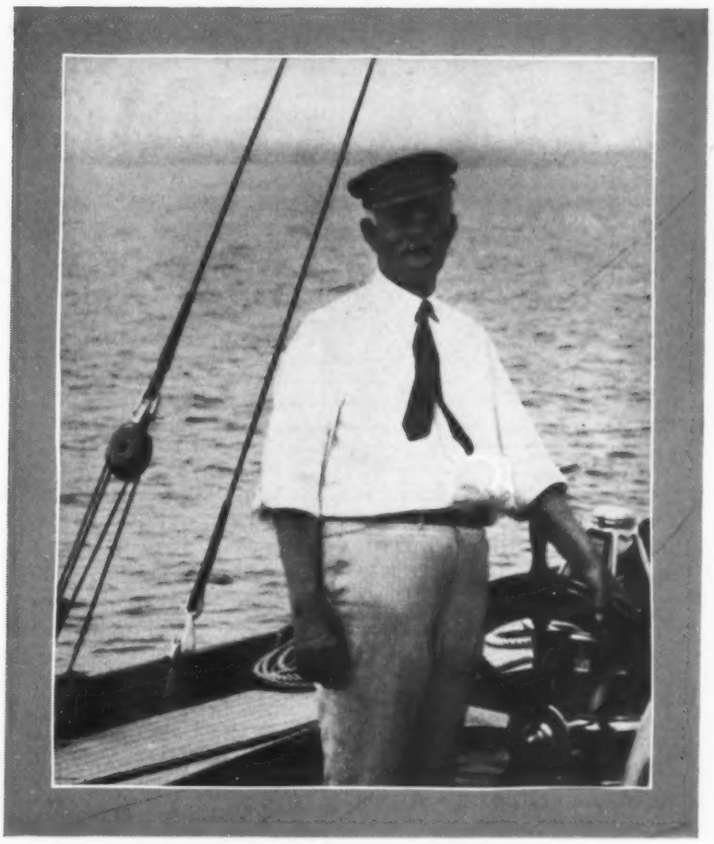
At least two American yachts are also going across for this latter event. The schooners *Quita*, owned by George Woodward, Jr., of Philadelphia, and the *Primrose IV*, owned by F. L. Ames, of Boston, will both make the trip. The *Blue Water*, sailed by her owner, Melville R. Smith, may also go, so we should be well represented this year.

Entrance Fees to be Exacted

Hereafter it looks as if the racing men on the Atlantic Coast will have to help defray the expenses of running the races in which they sail. With this proposal we believe no fair-minded racing man will quarrel.

The cost of the actual physical labor of running races through a championship season, and properly recording results, deciding protests and the like, has increased rapidly as the sport has become better organized and standardized through the efforts of the various yacht racing associations and the larger yacht clubs. To whom is it more proper to look for financial help to carry out this necessary work than the men benefited by it? Last year the Marblehead clubs initiated a system of entrance fees that worked most satisfactorily. The members of the Yacht Racing Association of Long Island Sound voted at its last general meeting to adopt a somewhat similar plan to meet the increased revenue requirements, which have heretofore been borne by voluntary subscriptions from a few public spirited yachtsmen. A small blanket entrance fee covering the entire season will be charged those yachtsmen desiring to sail regularly and to qualify for the Association championships. The yachtsmen of Long Island Sound should consider it a privilege to pay this fee.

In the World of Yachting



E. WALTER CLARK

OF the Philadelphia yachtsmen who race on Long Island Sound and off Marblehead and the New England Coast, none is better known than E. Walter Clark, the owner of a long string of racing craft which have all borne the name of "Irolita." In fact, his partiality to this name has caused him to be generally known as "Irolita" Clark.

Much of Mr. Clark's sailing in the last twenty-five years has been in the larger yachts, and mostly in schooners, so that when it was announced last summer that the former America's Cup defender "Resolute" had been purchased, and was to be changed over to schooner rig, it was not surprising to yachtsmen to learn that the new owner was E. Walter Clark. The "Resolute" is already overboard and she will be seen in most of the races of the New York and Eastern Yacht Clubs this season, with her owner at the helm. She has, of course, the new staysail rig, with (in addition) several sails never before seen on yachts, and undoubtedly much will be learned from her during the coming season.

Mr. Clark's first "Irolita" was the 50-foot water line cutter of that name, built by Herreshoff in 1903. A few years later he owned the 65-footer of the same name and from the same designer, which he altered to a schooner in 1908 and raced for several years. Then he purchased the schooner "Queen," which he renamed the "Irolita." He kept her for a number of years and in 1915 he purchased the famous sloop "Istalena," one of the 57-foot class, renamed her, as usual, and altered her to a schooner. He has raced her ever since. In 1914 he was one of the leading members of the syndicate which built the unsuccessful cup defender "Defiance."

Another name of which Mr. Clark is fond is "Zipalong." He has owned several fast power cruisers of this name, using them generally as tenders for his racing yachts.

Mr. Clark is a member of the New York, Larchmont, Eastern and Philadelphia-Corinthian Yacht Clubs.

In the Lee of the Longboat

by Cap Stan

MY paragraph last month anent the Juniors brought forth a letter from "Old Salt," who says, in part: "While I agree with you in all you say about present-day Junior yacht racing, I believe you have missed one important point, and that is that the Juniors of today must have unusually wise old heads on very young shoulders, or else they are in grave danger of becoming badly spoiled. In my younger days we were hard put to find any kind of a boat in which to sail. We embarked aboard anything we were lucky enough to come across, which was usually an old, leaky hull with patched sails and dubious rigging. We trudged weary miles in the early morning to where our craft was berthed, and more weary miles homeward at night, for seldom did we have any other form of transportation than "Shank's Mare." But we learned sailing, seamanship, and something about rigging aboard our old, leaky, cranky craft. It was a hard school in which to learn, but a thorough one. I doubt if the Juniors of today get the real groundwork in sailing and seamanship which we got, and, as I said before, am afraid they are in danger of becoming spoiled."

The only comment I can make to Old Salt's letter is to sing out lustily — Right-O! I've seen Juniors who have been spoiled, and who were sadly lacking in fundamentals — they didn't have to work and suffer for what they got, their pleasure was handed to them on a platter. May the parents of our present-day Juniors note what the Old Salt says, train the youngsters in the rock-bottom fundamentals, and in appreciation of the many advantages which they enjoy — and our Juniors will develop into better sailors — and better men.

* * *

Despite the facts that they needed 600 lbs. inside ballast to keep them on their feet, and that their masts buckled like a weeping willow in a summer tempest, the Sound Interclub boats have proven to be excellent little craft. Their speed is close to that of the Victory boats, which are larger and carry more sail. They handle beautifully. Their cockpits are large, deep and comfortable, with real seats and a coaming at the right height to park your back against. The cabins have two good transoms, 4 feet headroom, and a remarkable amount of space for a 29-foot boat. In short, they are perfectly logical craft for racing, afternoon sailing, and short cruises — a rational type which the Universal Rule does *not* develop. More small boats of the Interclub type are what the sport needs. I hope it gets it.

* * *

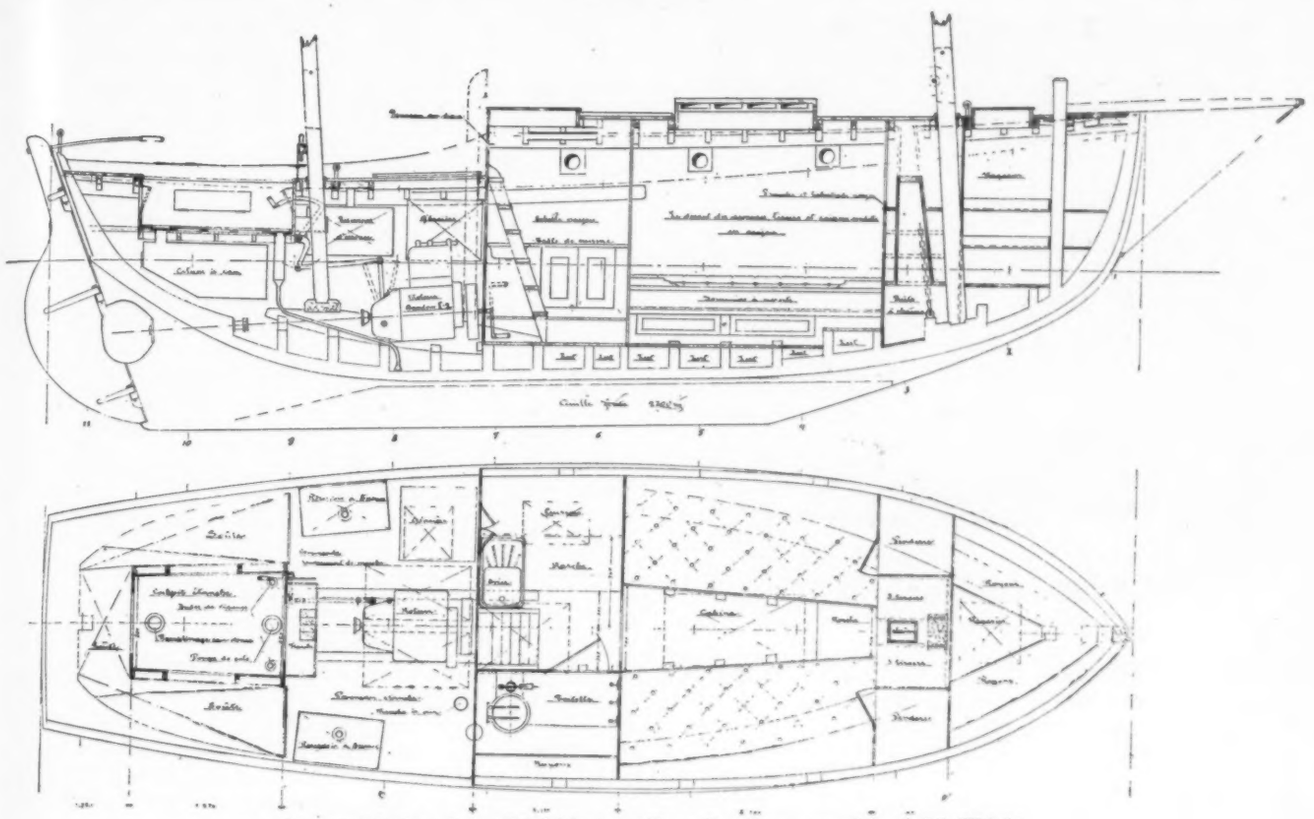
Harry Maxwell made a mighty pertinent suggestion the other day when he opined that the mainsails on most of our small one-design classes were cut too low on the foot, resulting in the boom being an everlasting curse to all on board, whether in a race or on an afternoon sail. Either the boom should be higher on the mast, or else the foot of the sail should be cut with an upward rake toward the outboard end of the boom, so the skipper, crew and guests wouldn't have their view unnecessarily impaired, or get walloped on the bean every time the boom goes over. What matter if there is a small sacrifice of sail area? All the sails in a class would be alike — no one boat would gain or lose speed — and all the boats would be more comfortable and usable. Designers and promoters of one-design classes, please note.

* * *

A new paint, or "brushing lacquer," similar to a well-known automobile body finishing substance, is now on the market, and if it works out on boats, will be a boon to yachtsmen, both cruising and racing. The body finishing stuff has a celluloid base, and dries so fast that it has to be sprayed on with an air gun. The new dope is also a celluloid concoction, but is made to use with a brush, and dries hard in thirty minutes, leaving a lustrous surface, which shows no brush marks, and will take a beautiful polish, besides being immune from ordinary scratches, etc. It is said to stand any kind of scrubbing, and to last indefinitely. Now, who wouldn't like to have their topsides painted with this stuff? And though not anti-fouling, what a wonderful racing bottom it would make — and how easy it should be to get a quick, fast, lasting surface!

The manufacturers are dubious about its action in salt water. However, I have painted my tender, top and bottom, with it — and the old dory looks like a million dollars, as the lacquer has stuck and kept its lustre for about three weeks. If further tests prove that it is the goods, I'll let you hear about it.

Oh, yes. It can be had in practically any color, including a transparent grade, which, put on over varnish, should make bright work last an entire season without attention. Let's hope it works out!



Accommodation plans of 29½-foot auxiliary *Sea Pup*, owned by J. M. Wright.

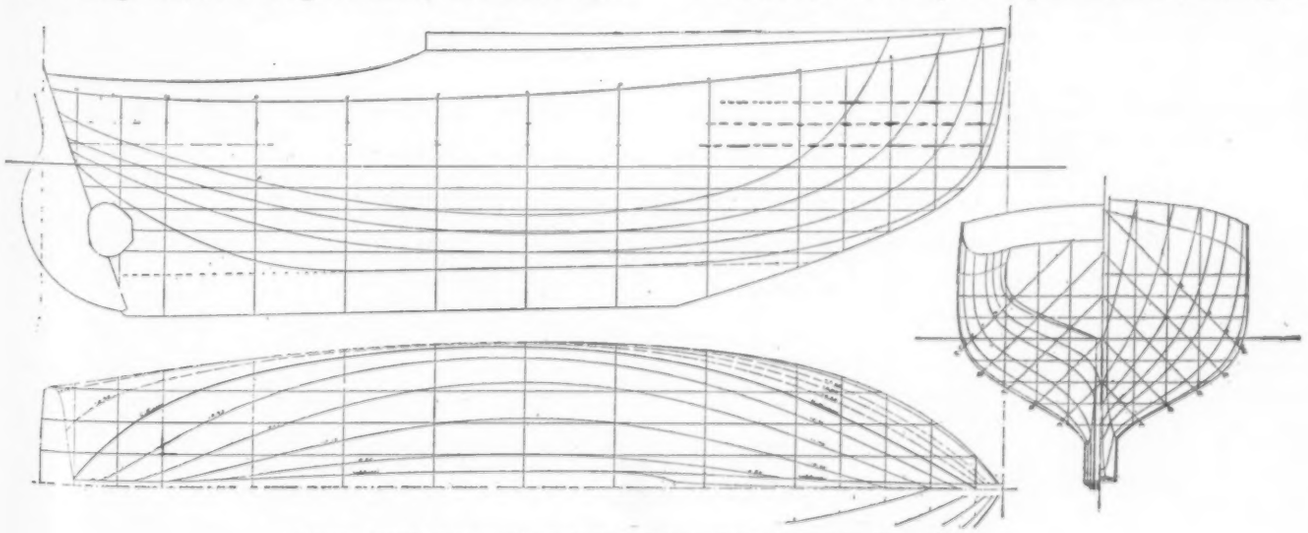
Sea Pup, an Auxiliary Single-Hander

A SMALL single-hander of unusual merit, in the design of which went much thought both as to form and detail, is the little 29½-footer *Sea Pup*, built in France last year for an American resident of Paris, J. M. Wright. The plans were drawn by Victor Brix, who carried out admirably the owner's ideas for an able, seaworthy and roomy craft for coastwise cruising and one that could be easily driven under power when used on the rivers and inland waterways of France.

Mr. Wright formerly owned, in the United States, the Alden-designed ketch *Sea Dog*, formerly the *Bonnie Jean*, well known to many of YACHTING's readers.

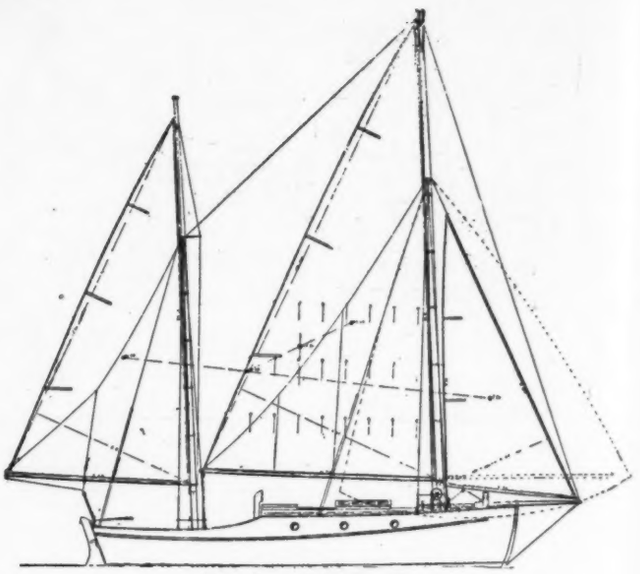
The design shows a long waterline and short ends. Her raised deck gives her somewhat of a resemblance to a power cruiser, but she is primarily a sailing craft with auxiliary power and not a power cruiser with auxiliary sails. On a limited length the raised deck gives much more room below. The sections are well turned, with plenty of deadrise, the forward sections being sharp for easy driving under power, and the run easy and clean. The transom stern has a slight rake and the rudder is hung outboard and is fitted with a tiller. She is rigged as a jibheaded ketch with a generous sail plan, the masts being stepped in a tabernacle on deck so that they can be swung back and lowered for passing under bridges.

The motor, a 12–15 h.p. two-cylinder outfit, turning at



Lines of 29½-foot auxiliary built in France from designs by Victor Brix.

Model of the *Sea Pup*.



Sail plan of the *Sea Pup*.

800 r.p.m., with reverse gear, is installed in a separate compartment under the bridge deck, with a hatch directly over it and controls in the cockpit within reach of the helmsman. Below deck she is well laid out with a comfortable main cabin with two transom berths, a large galley at the after end and a toilet room. There is plenty of locker and storage space forward, and 6 feet 2 inches headroom under the beams. A Homelite generating set furnishes electric lights throughout. Her dimensions are: l.o.a. 29 feet, 7 inches; w.l. 27 feet, 7 inches; beam 8 feet, 10 inches; draft 4 feet, 7½ inches. She is copper fastened with outside ballast of iron and lead inside.

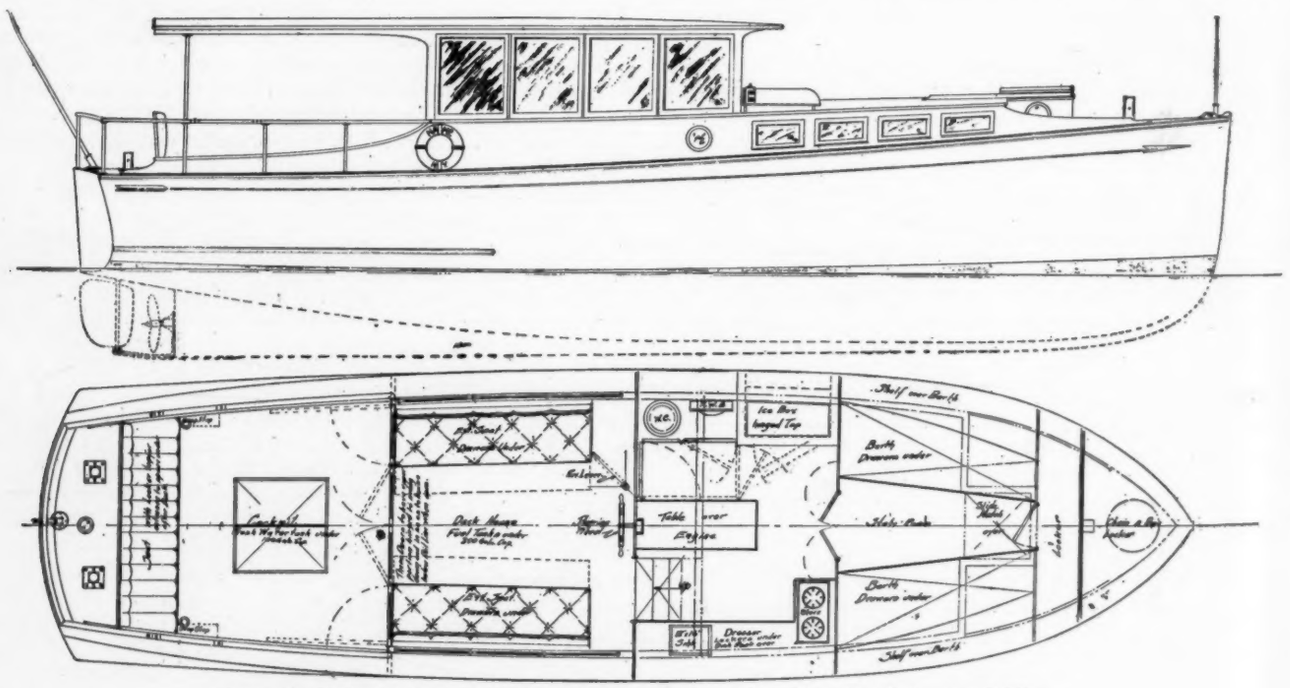
Her owner used her last summer and found her remarkably able under all conditions. She carries her sail well and is dry and yet easily driven. Her builder was Eugene Abeille and her cost complete, including engine, was about $3,500.

A Novel 36-foot Deckhouse Cruiser

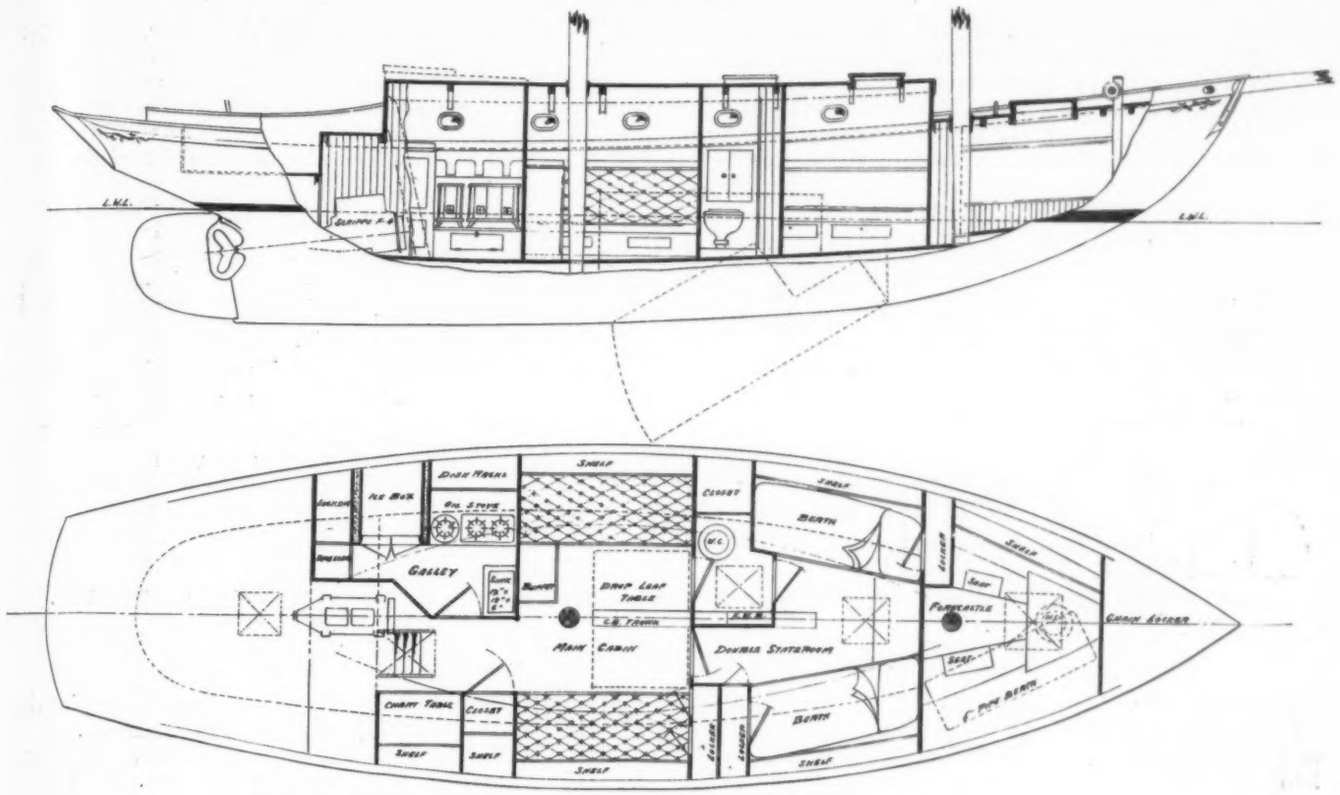
THE accompanying plans, from the boards of Livingston & Rice, New York City, show a rather novel craft with a deckhouse which can be entirely enclosed, giving shelter to the entire party from bad weather, or used as sleeping space for two. Also, it can be thrown open to give an open cockpit 16 feet long, which is much to be desired on summer days.

Under the trunk forward there is a stateroom with a locker under forward deck. Abaft this is a compartment in which is located, on the starboard side, a sink, stove and dresser, with lockers under and dish racks over. The engine is under a folding work table in the center, while on the port side forward is the ice box, and a toilet with a set of folding doors arranged so that when closed in they leave the port side of engine entirely accessible.

The craft is 36′ 9″ long overall, 36′ on the waterline, 10′ beam. With a Hall-Scott Six she should make 15 m. p. h.



Plans of a 36-foot fast power cruiser of unusual design, from plans by Livingston & Rice.



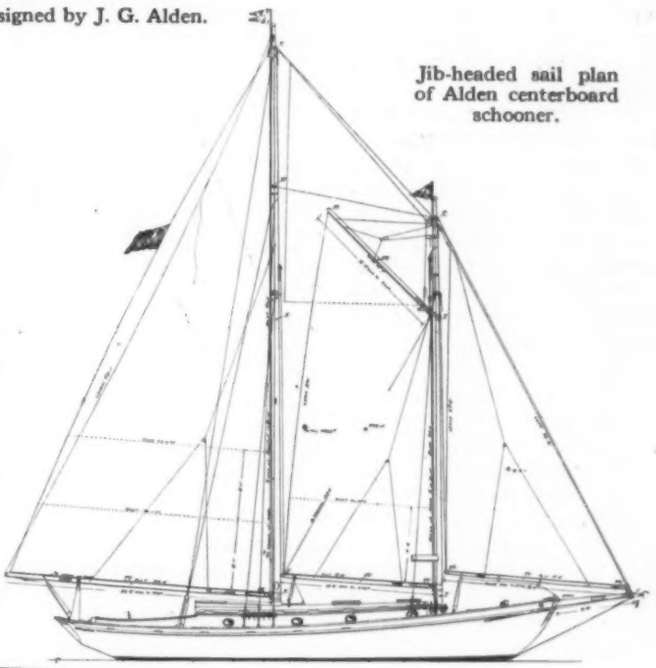
Plans of a 43-foot centerboard schooner designed by J. G. Alden.

A Fine Centerboard Auxiliary

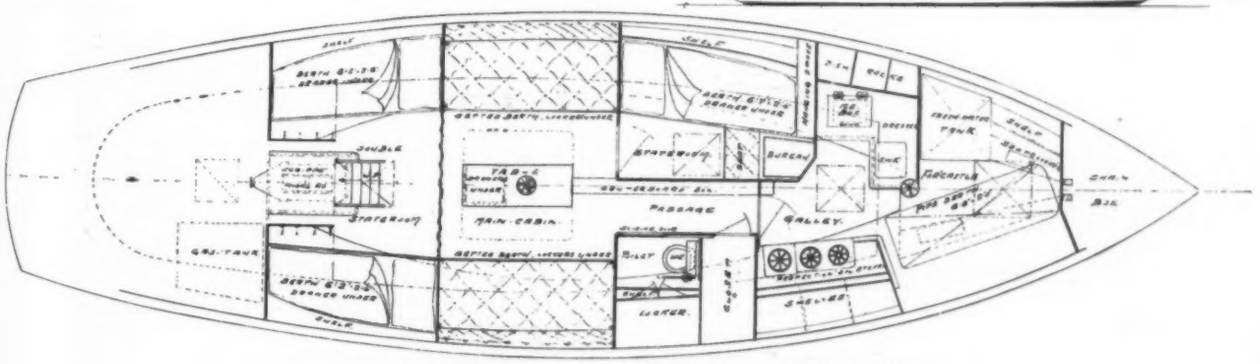
IN recent years the development of the modern cruising boat has been in the keel type, but the advantages of moderate draft are too great to be ignored. To meet a growing demand for a moderate draft boat, John G. Alden, of Boston, has prepared plans of a standardized auxiliary schooner, and has started construction of six boats for fall delivery.

The new boats will be 43′ 6″ over all, 33′ water line, 12′ 6″ beam and 4′ 2″ draft without centerboard. An iron shoe weighing 8,000 lbs., and additional inside ballast, will make the boats absolutely uncapsizable, and Mr. Alden believes that they will be perfectly seaworthy, nearly as fast, and have slightly better accommodations than his successful standardized 43′ keel models. The draft is sufficient for reasonable performance to windward without the board, and the boat may be hove-to without its being down.

Various types of rigs have been drawn for coastwise cruising, and the moderate Marconi shown will probably be used, though the designer himself is rather partial to



Jib-headed sail plan of Alden centerboard schooner.

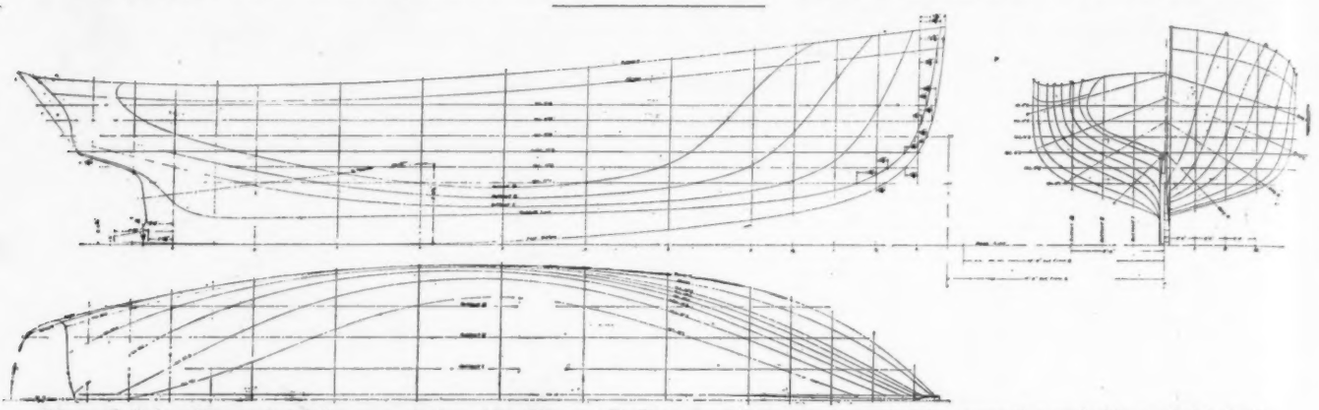


An alternate accommodation plan, showing galley forward.

the double headrig with gaff topsail. The advantages of having the galley aft are many, and a most comfortable double stateroom may be obtained. With the galley forward a very large main cabin can be had, which may be subdivided by a curtain, making, in effect, two cabins with a fair sized single stateroom, and a separate forecastle.

A 15–40 h.p. Scripps motor, with starter, will be installed, which should give a speed of 8 miles an hour.

Mr. Alden states that the cost of the centerboard model of this length runs about 7% higher than the stock keel boat of the same length, and explains this by the fact that there is more cubic feet in the center-boarder.



Lines of 60-foot Nantucket fisherman, designed by Thomas D. Bowes. She is of a type that is seaworthy and able on light draft.

A Shoal Draft *Nantucket* Auxiliary Fisherman

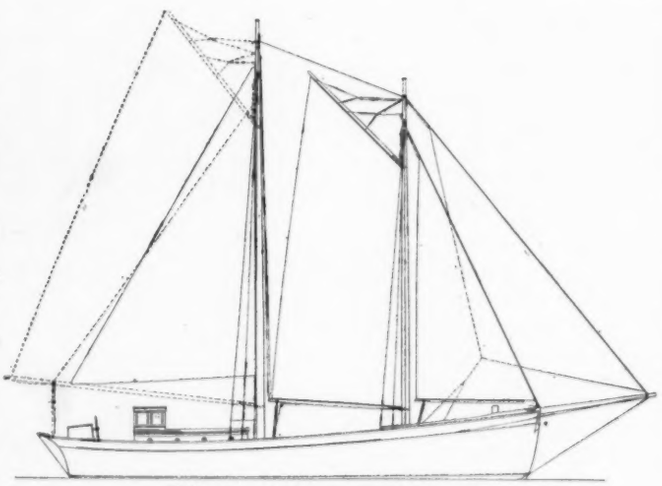
THE plans of the Nantucket Flounder fisherman shown in this issue is one of the newer and later types of boats for this work designed by Thomas D. Bowes, M.E., of Philadelphia. As she is of shoal draft, yet intended for outside work in all weather, the design is of especial interest at this time. This boat is 60 feet over all, 17 ft. 3 in. beam and 6 ft. maximum draft.

A study of the lines will be interesting to any yachtsman considering a small boat for long, offshore cruising, where the maximum amount of vessel is desired for a given over-all length.

These fishermen are designed to carry a heavy cargo at relatively high speeds and to be able sea boats, so that they can stay out on the Nantucket Shoals in winter weather.

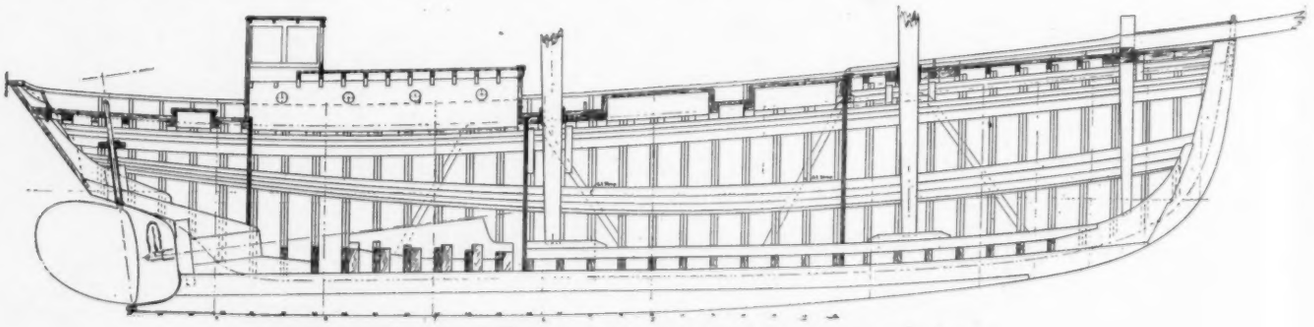
They are equipped with Diesel engines, to give a speed of 10 knots or better with a full catch aboard. The reason for this relatively high speed is to enable them, when they find it necessary, to take their catch direct to the New York market. The usual procedure is to bring the catch into the old town of Nantucket, ice the fish in barrels and reship to New York by steamer.

These boats handle well under sail and have proven to be an ideal combination of power and sail. With some modifications they would make an ideal cruiser with a wonderful amount of room below and on deck for the man who wants to take long trips in a small boat in comfort and with a small crew. For this work, they could be equipped with a jib-headed mainsail, a gaff-headed foresail, no bowsprit and a forestaysail with boom and traveller.

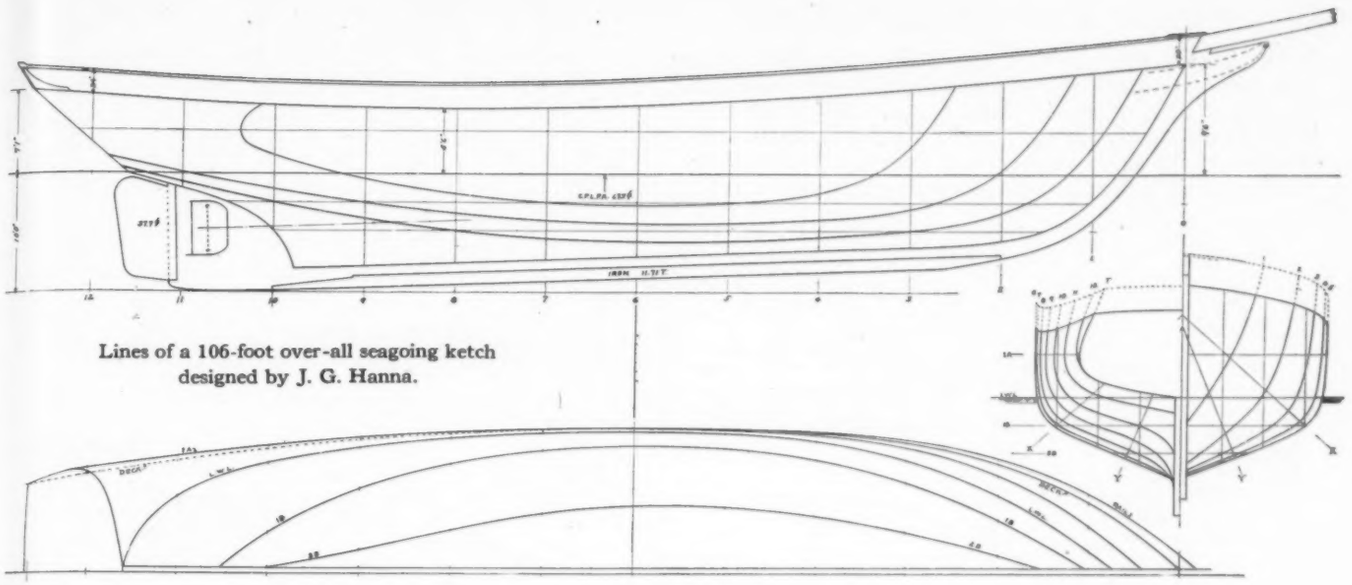


Sail plan of Nantucket fisherman.

A boat of this type offers many possibilities for the man who wants a rugged craft for cruising, that can take the weather as she finds it. Ample accommodations can be worked out below, with full 6 feet headroom under the flush deck. Being short ended, there is plenty of space to get a lay-out with lots of elbow room. With plain but substantial interior joiner work, she could be constructed at very moderate outlay.



Construction plan. There is plenty of room for interior accommodations.

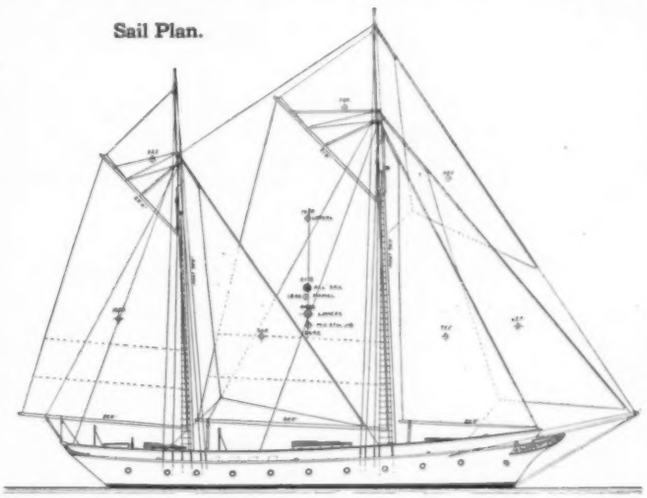


Lines of a 106-foot over-all seagoing ketch designed by J. G. Hanna.

Faith, an Offshore Cruising Ketch

A LARGE auxiliary ketch, from the board of J. G. Hanna of Dunedin, Fla., is under construction at Story's yard, Essex, Mass., for a Chicago yachtsman, that will command unusual attention because of the fact that she was designed for long passages at sea. Every effort has been made to produce a seaworthy vessel that would give the maximum comfort off shore, and a rig that can be easily handled at all times. Nothing, therefore, has been sacrificed to appearances and there is nothing in her design of the conventional yacht type. *Faith* (as she will be named) is a large vessel, being 106 feet long overall, 97 feet on the water.

Sail Plan.

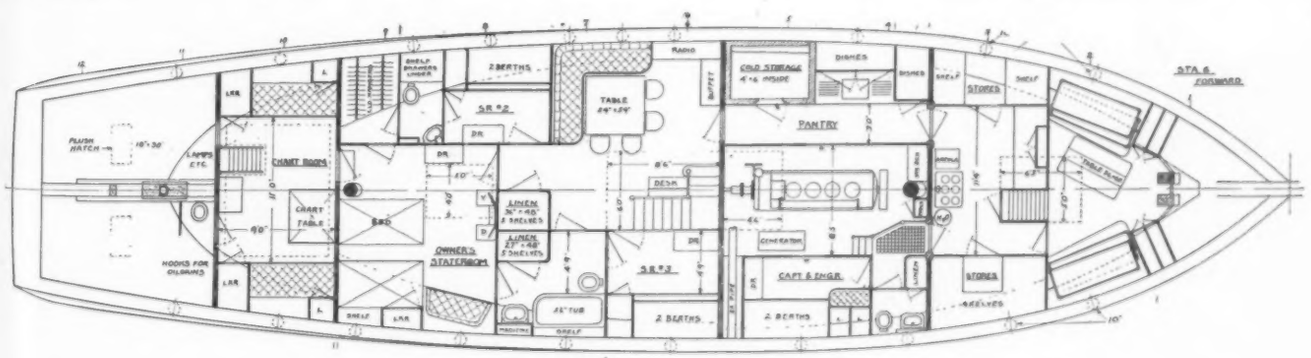


In discussing the design, Mr. Hanna revealed the interesting fact that it was the publication in YACHTING nearly two years ago, of his modification of Captain Slocum's *Spray*, that finally resulted in the production of these plans.

"The owner wrote me," says Mr. Hanna, "that my appreciation of the qualities of *Spray* gave him courage to put before me some ideas for a vessel which he had been cherishing for a long time, but which he feared would get unsympathetic consideration from designers steeped in strong prejudices in favor of conventional yacht types. He had owned or chartered a number of such yachts, but had not been able to attain in any an ocean voyage that might by any strength of imagination be called a pleasure trip. As soon as they ran into bad weather, the extreme angle of heel and the violent motion of deep, outside ballasted craft put the galley out of commission; the long, thin bows stuck into every wave and kept the decks streaming; tiresome hours were wasted hove to; and so it went.

"The gentleman wanted no half-way compromise with such conditions. He insisted on a vessel that could carry

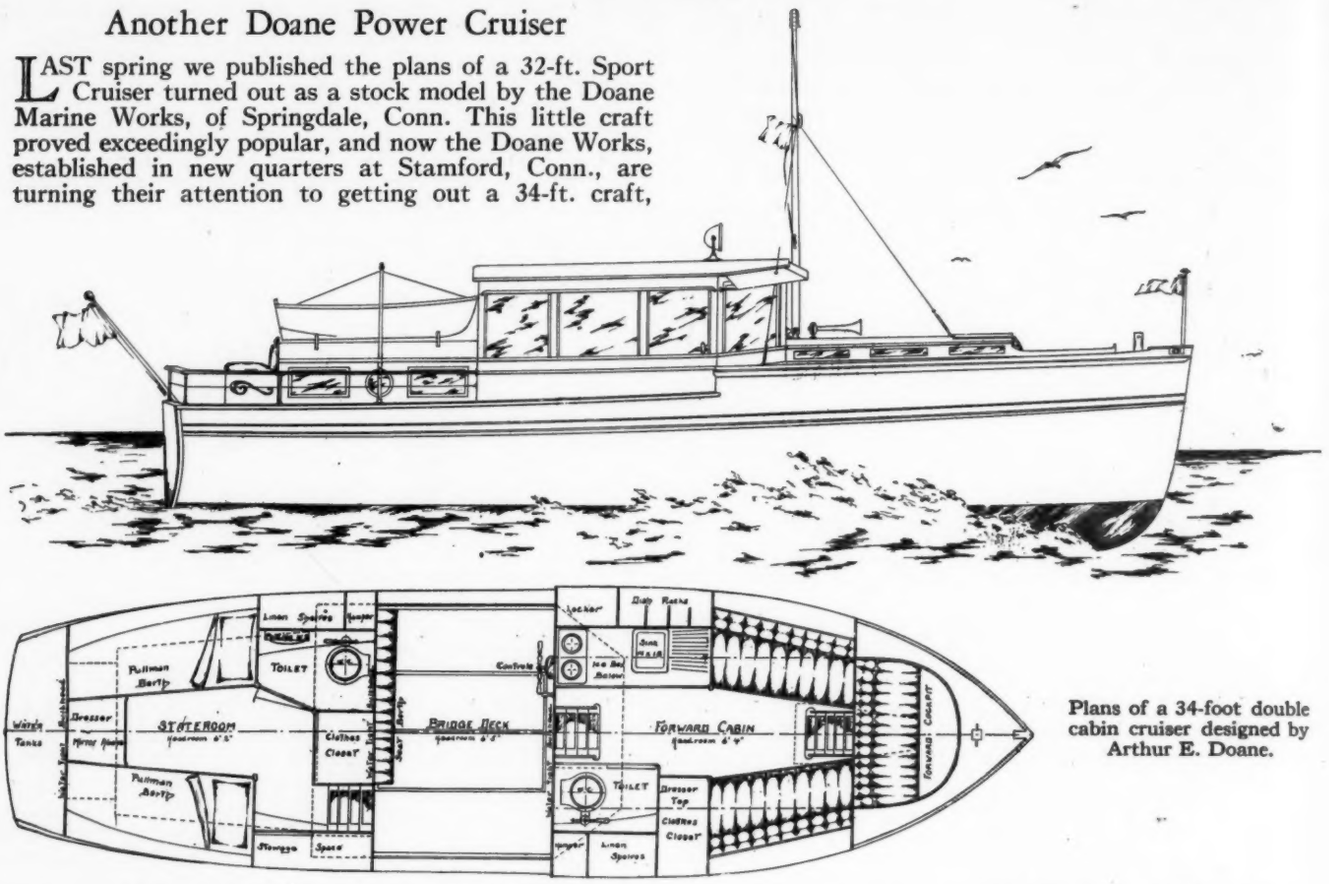
(*Continued on page 92*)



Accommodation plan of seagoing ketch.

Another Doane Power Cruiser

LAST spring we published the plans of a 32-ft. Sport Cruiser turned out as a stock model by the Doane Marine Works, of Springdale, Conn. This little craft proved exceedingly popular, and now the Doane Works, established in new quarters at Stamford, Conn., are turning their attention to getting out a 34-ft. craft,



Plans of a 34-foot double cabin cruiser designed by Arthur E. Doane.

similar to the Sport Cruiser, with a double cabin arrangement, more room above and below decks, yet a boat which may be kept and used without a paid hand. The accompanying cuts show a handsome profile and a roomy interior, with double stateroom and toilet room aft, and main cabin, galley and toilet room forward. The bridge deck is about amidships, with the motor compartment under, space being available for any of the popular makes and sizes of motors, chosen according to the owner's desires for speeds between 10 and 14 miles an hour.

Cormorant, an Interesting Ketch

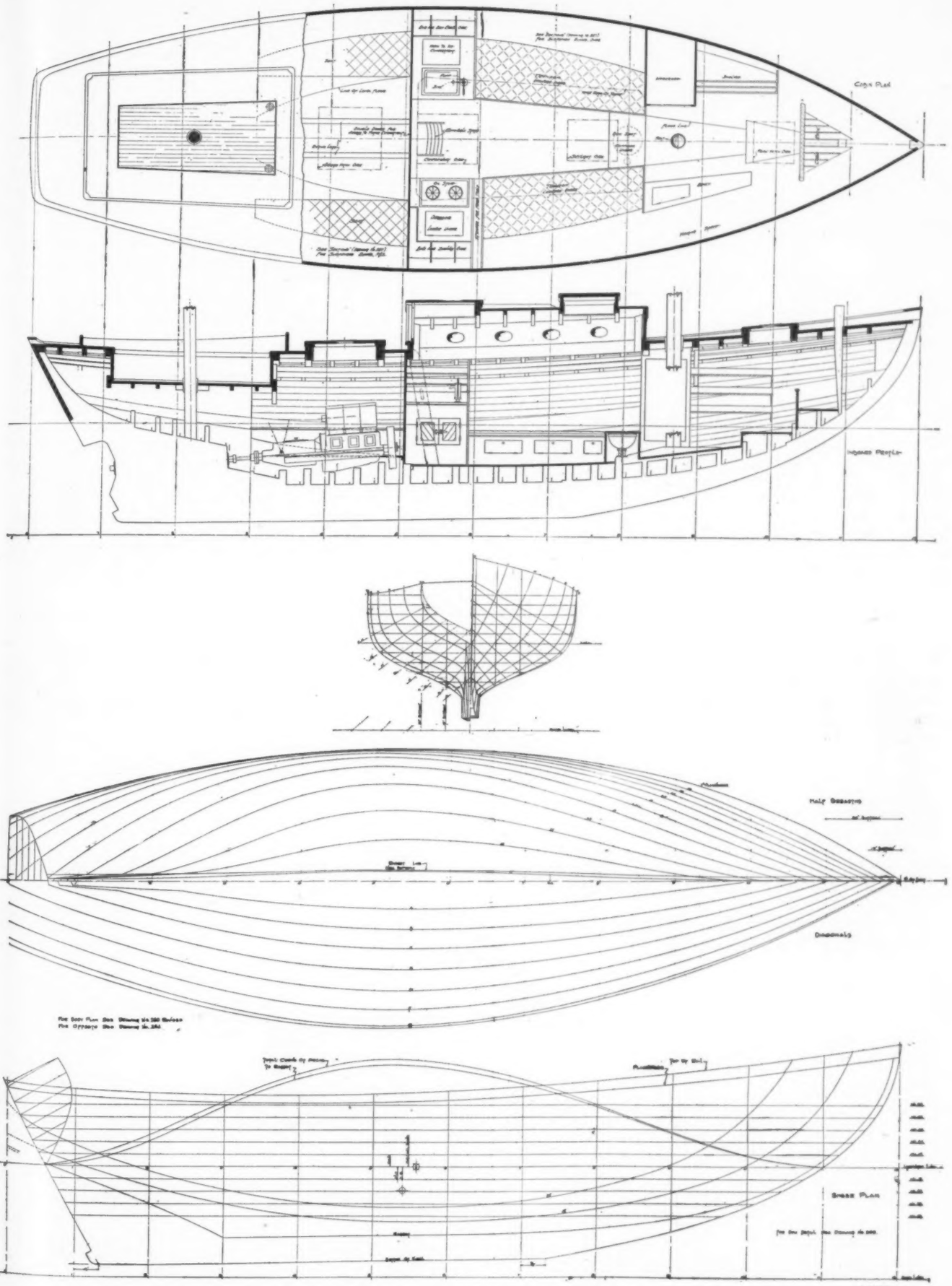
THAT shoal draft, good beam, good looks and full headroom can be obtained in a small auxiliary cruiser in conjunction with a powerful, sweet-lined and easily driven hull is evidenced by an inspection of the accompanying plans of a 36-foot over-all ketch designed by P. L. Rhodes, of New York, for Mr. Robert B. Noyes, of Ponce, Porto Rico, and now being built by native labor and of native woods on the owner's coffee plantation near Ponce.

Sail plan of *Cormorant,* a 36-foot ketch.

Cormorant was developed to meet local conditions in Porto Rican waters, where the seas are short and sharp, and cruising harbors are shallow. Marine railways are few and far between, necessitating beaching for cleaning and painting on a small fall and rise of tide. Therefore, shoal draft was necessary, and a good power plant to help in making real progress to windward against mean seas. On a water line of 31′ 6″, beam of 10′ 8″, and draft of 4′, Rhodes has turned out a remarkably sweet hull, with easy sheer and buttock lines and sweeping diagonals and waterlines. The short transom stern was adopted in order to get as much boat as possible on a given over-all length.

The ketch rig was chosen for general handiness, the jib-headed mizzen trimming on a boomkin. The spacious bridge deck was designed to accommodate a small tender stowed athwartships, as towing a tender is impracticable on account of the rough water to be encountered.

The arrangement shown was drawn up to meet the particular requirements of the owner, though the hull is adaptable to almost any layout desired. Altogether, *Cormorant* is a decidedly handsome and interesting little cruiser, apparently ideally suited for the purpose for which she was designed.



Lines, body plan and accommodation plans of 36-foot shoal draft ketch designed by P. L. Rhodes.

Model Yachting

ON June 27th and 28th a series of races will be sailed on Malden Pond, near Boston, for the selection of a challenger to represent the United States in England at the race for the *Yachting Monthly* Cup, the only international challenge cup for model yachts in existence. Several Boston boats have been entered and two from the Providence Miniature Yacht Club. The races will be sailed under as nearly the same conditions as obtain in England as it is possible to get them, and they will be under the supervision of Joseph Weaver, last year's international challenger who raced at Gosport with the *Slipper*.

The international race itself will be held again at Gosport sometime the latter part of August. This should give the owner of the American boat selected plenty of time to get across and have a week of tuning up on the waters on which the race will be sailed. F. H. Tucker heads the selection committee appointed by the American Model Yacht Racing Association.

Racing at Melrose Highlands

THE Club held three very successful races at Lake Quannapowitt during the month of May. On May 16th and 23rd the races were won by T. D. Wildon's *Phantom*. On May 30th Roswell Roulston's *Shark* finished first, with *Phantom* second, *Sulma* third, *Twilby* fourth. The standing on the season's cup is as follows: *Phantom*, T. D. Wildon, 41; *Shark*, Roswell Roulston, 33; *Sulma*, A. R. Brown, 18; *Twilby*, Penley Ellis, 6; *Rascal*, Henry Andrews, 6. This club visited the Boston Model Yacht Club on May 31 and were entertained by Commodore Black of that organization. Plans for one "R" boat built according to the new rule of the Association are completed and construction is well under way also on one six-meter model.

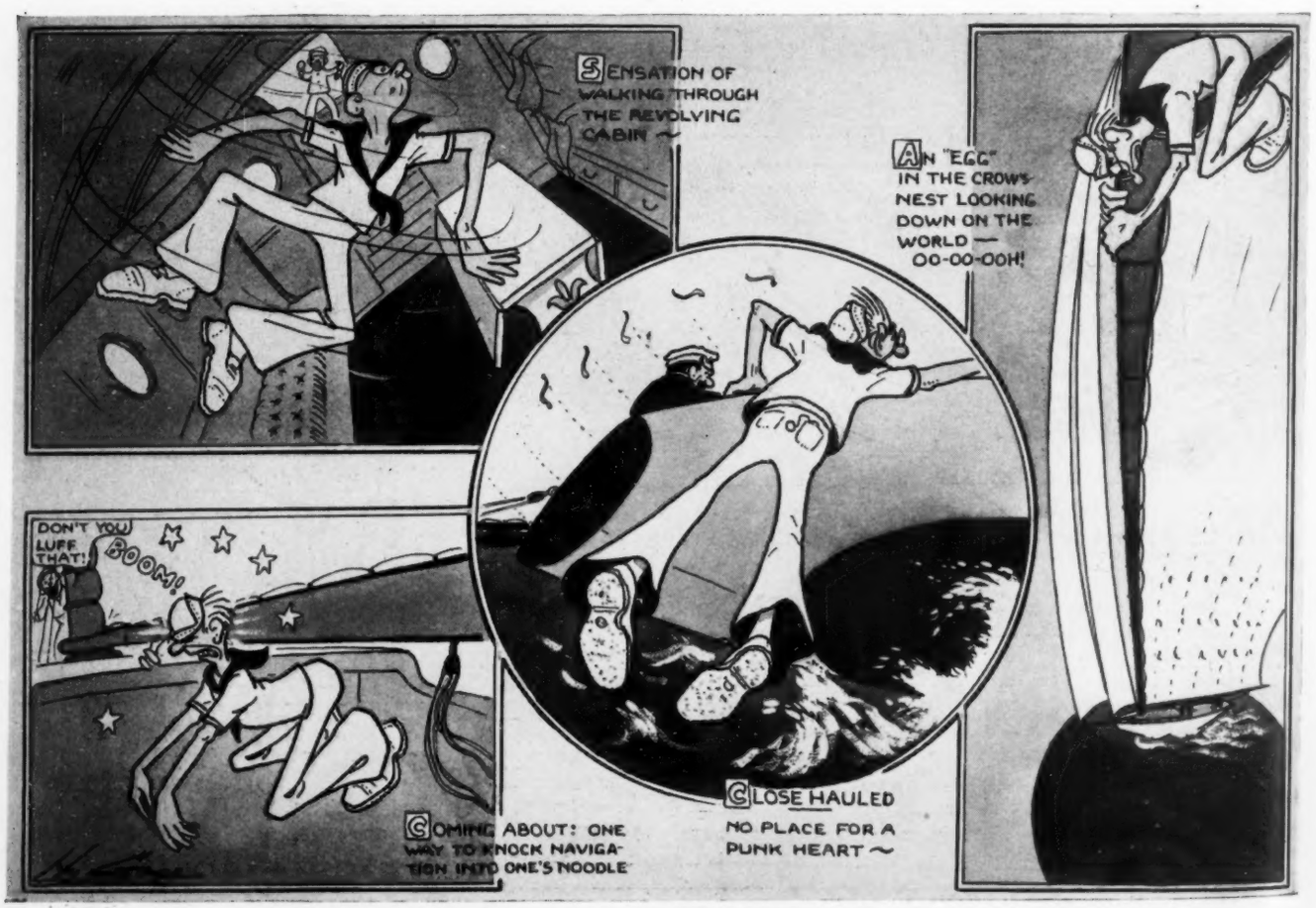
Model Yachts to Race at Put-in-Bay

THIS year, as has been the case in the past two seasons, the model yachtsmen of the Great Lakes will have a place in the annual regatta of the Inter Lake Yachting Association, to be held at Put-in-Bay during the week of July 12 to 17.

The races will be held on Monday and Tuesday of the week and will be governed by a committee, the chairman of which was appointed by Commodore Shantz of the I. L. Y. A. The racing and rating rules will be those adopted by the Model Yacht Racing Association of America.

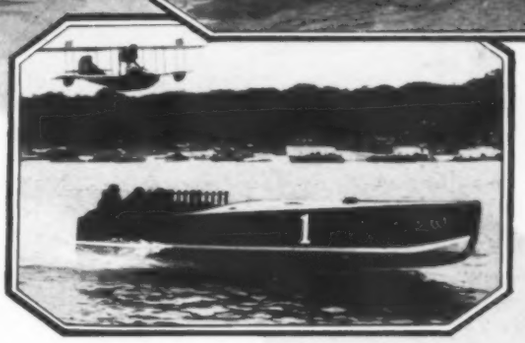
The sailing will be in Class C and the new Class R. This should be interesting, as Class C is governed by a rule which was devised strictly for model yachts, while Class R is rated by the Universal Rule to a scale of 1½" to the foot and should interest the skippers of the larger craft, as well as the model men. Many entries are expected in both classes, these coming largely from the Detroit Model Yacht Club and the Toledo Model Yacht Club.

The power boat class is limited to the displacement type with a piston displacement of 1 cubic inch, engines to be run by saturated steam. Fast time has been made in previous years, in excess of 20 miles per hour being attained. Entries in this class have heretofore been small, but there is a possibility of an entry from the present record holder, H. C. Field, of the Detroit Model Y. C.


SENSATION OF WALKING THROUGH THE REVOLVING CABIN ~
AN "EGG" IN THE CROW'S NEST LOOKING DOWN ON THE WORLD — OO-OO-OOH!
DON'T YOU LUFF THAT!
BOOM!
COMING ABOUT: ONE WAY TO KNOCK NAVIGATION INTO ONE'S NOODLE
CLOSE HAULED
NO PLACE FOR A PUNK HEART ~

Impressions of a first sail on a racing yacht — By one who knows nothing about 'em.

Left: Miss America II—fastest boat ever built. World's Record 80.56 m.p.h. Right: Miss Detroit V, Gold Cup winner 1915.



Left: Miss America I. Won Harmsworth Trophy in 1920.

Chris Smith's Champions are Valsparred!

Chris Smith, famous for having built more champions than any other boat designer, standardizes on Valspar. He writes:

Valentine & Company, April 26, 1926
New York, N. Y.

Gentlemen:

"All of our famous racing boats from Reliance I built in 1911, to Miss America II, the world's fastest boat built in 1922, were Valsparred.

"Four years ago we started production on standardized Chris-Craft. After the severe test given on racing boats, naturally, we continued its use, and every Chris-Craft is Valsparred, of course!"

Very truly yours,

Chris Smith

VALENTINE'S VALSPAR
The Varnish That Won't Turn White

Right: Packard Chris-Craft Gold Cup winner 1923

Right: Miss Chicago. Gold Cup winner 1920. Below: The Chris-Craft race at Detroit. Photos by M. Rosenfeld, N. Y.

SAILOR'S WORD BOOK

Compiled & Illuminated by H.J. Peck

A is for Anchor
It hooks in the Mud

B is for Boom
that Swings o'er with a thud

C is for Captain ~
& so's your Old Man

D is for Doctor
He slings a mean Pan

E is for Eye-splice
Much used on sea Craft

F is for Forward
just opposite Aft

G is for Galley
and also for Gale

H is for Halyards
that h'ist up your Sail

I is for Irons
We sometimes get in

J is for Junk
from the land of Chin-chin

K is for Kicker
oft Kussed by Yachts' Men

L is the Leeway
We make ~ now & then

M is for Mate
Who Keeps the Crew chipper

N is for Noah
The original Skipper

O is for Octopus.
I have heard tell
He looks like the Devil
& acts just like ~ you Know

P is for Painter
Which tethers the Dink

Q is for Quarter ~
What else did you think?

R is for Rudder
It's always astern

S is for Sailor
for Home ports ayearn

T is for Tricks
that we take at the Wheel

U is for Under-sea
Life 'neath the Keel

V is for Vessel
that plows o'er the Main

W's Wind
that blows her Home again

X is for Xebec
(see X word puzzles)

Y is for Yachting
the greatest Sport Known

Z is for Zeal
By all Yachtsmen 'tis shown.

Gloucester-Portland Auxiliary Race

A DETERMINED effort has been made to find a handicapping method for the 1926 Gloucester-Portland Auxiliary Race which will yield a closer finish than in 1925, when each contestant received an equal amount of gasoline.

The Committee has devised a method which is wholly arbitrary, but which, when applied to the known performances of several of the entries, gives each boat sufficient gasoline to cover approximately one-third of the course under power alone. Further, it is simple of application. Theorists will complain that certain important factors have been ignored and that the use of an arbitrary formula does not "teach anything." However, the Committee feels that the most important thing to strive for is a closer finish between normal types of cruising craft than has yet been attained in auxiliary races, regardless of other considerations.

The 1926 race, to be held under the auspices of the Boston Chapter of the Cruising Club of America, will, as before, be an open event for the Gloucester-Cape Elizabeth Auxiliary Trophy. Second and third prizes will be given if the number of entries warrants. Auxiliary cruising yachts of any type or rig under 50 feet over all length are eligible, whether belonging to a yacht club or not. The course will be the same as in 1925, from Eastern Point Breakwater, Gloucester, to and around Portland Light Vessel and return, distance 130 nautical miles.

Contestants will be sent off at the intervals of their handicap, from anchor, with sails furled and crew below deck, and scoring in the order of their finish. As in 1925, no paid hand will be allowed aboard in any capacity during the race. Prizes will be awarded at the finish.

Handicap: Scratch boat will allow ten minutes per over all foot (to the nearest half foot) difference in lengths. No restrictions on sails. Gasoline will be allowed under the following formula:

Piston Displacement (cubic inches) X r.p.m. ÷ 10,000 = number of gallons gasoline for the race. Contestants will report to the Committee boat back of Eastern Point Breakwater before 8 P.M., Daylight Saving Time, Friday, July 16th. Gasoline for the race will be issued by the Committee at current market prices. The first boat will be started at 7 A.M. Saturday, July 17th, followed by the others at the intervals determined by their sailing handicaps.

Vignettes of the Sea, By Felix Reisemberg

Harcourt, Brace & Co., 1926.

A NEW volume by Felix Riesenberg, who is well known to the readers of YACHTING, has reached us through the publishers, Harcourt, Brace & Company. *Vignettes of the Sea* is a series of short sketches covering incidents in the author's life at sea, both under sail and in steam. They are not only compelling, but give a vivid picture of life at sea in all its phases. The one on Captain Jamison, under whom the author served as a quartermaster in the American Line, is as vivid and forceful a picture of a capable officer of a trans-Atlantic Liner, who was something of a martinet, as we have ever seen. The opening vignette, *Fog*, is equally good and gives a word picture of groping through a blanket of North Atlantic mist such as could only be written by one who has stood on a steamer's bridge through days and nights of impenetrable mist.

A Thousand Times This Summer— You'll Want an *Elto*

AN Elto is as fine a shipmate as any yachtsman ever had.

Sturdy, powerful and willing, it will work uncomplainingly and everlastingly—"watch on, watch off, and relieve itself"!

In an instant it will transform any dinghy—big or small, light or heavy—into a swift, reliable power tender.

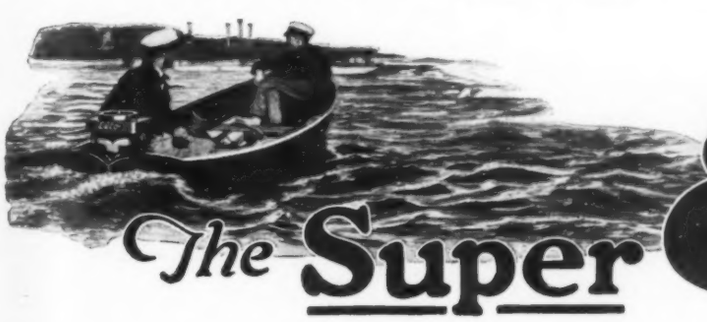
It leaves only a memory of the old, galley-slave sweating with oars. It takes the drudgery out of the trips between club and mooring. It opens new vistas in your favorite harbors. And it asks no more than a gulp of gas; berths cheerfully in the space left in a hanging locker or crowded forepeak.

It is an ideal auxiliary motor for the one-design classes. And its robust 4 H. P. fits it for dependable auxiliary duty on any type of moderate sized cruiser.

Quick starting—of course. That's the thing that brought it to instant fame above all others. *Rudder steering and* tiller line control from *any* part of the boat. Not so light as the lightest, but still an easy one-hand carry—and it pays for every ounce with power, stamina and long-lastingness.

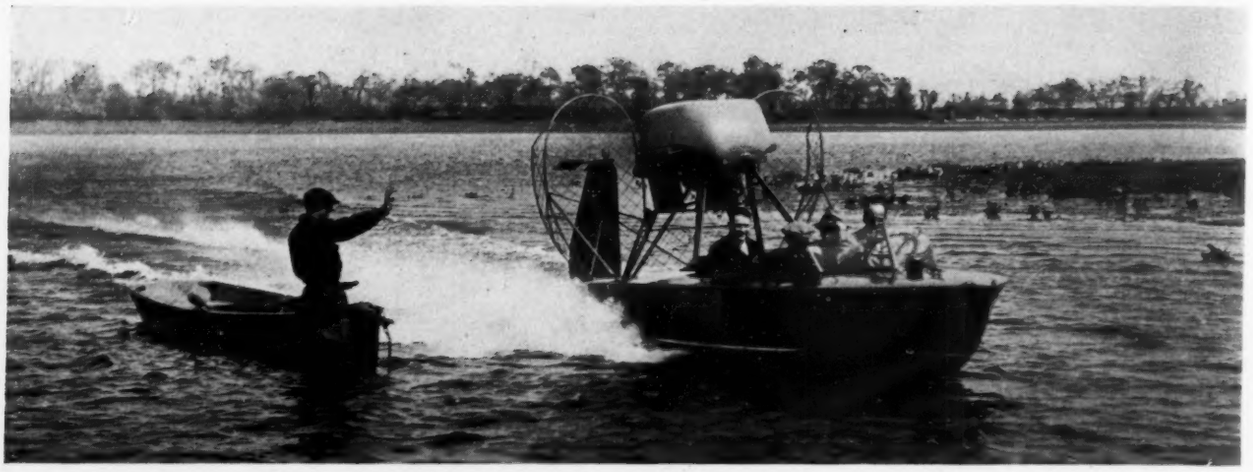
The Super Elto catalog, interesting and genuinely informative, will be sent on request.

ELTO OUTBOARD MOTOR COMPANY
OLE EVINRUDE, President
Dept. 2, Manufacturers Home Bldg. Milwaukee



The **Super** *Elto*

"Starts with a quarter turn"



The new "free bottom" runabout *Whistler* doing 30 miles per hour in shallow water in her recent trials on the Delaware, off Bristol. She can "cut the corners" in a way no water immersed propeller craft can do.

Of Interest to the Skipper

A VERY interesting trial trip of the new free bottom type of runabout, *Whistler*, described in the May issue of YACHTING, was made a few weeks ago on the Delaware River, off the plant of her builders, Huff Deland Aeroplanes Inc., of Bristol, Pa. Not only did this interesting craft, which is propelled by a Curtiss 8-cylinder 90 h.p. aeroplane motor, driving an air propeller, run most successfully upon the deeper waters of the Delaware, but she could cut corners by running at full speed in shallows on which there was only three to four inches of water. Also, with a cradle on wheels under her, she would propel herself over the land and she actually ran some thousand feet from the shop to the water's edge on land, under her own power.

Whistler's dimensions are: length over all, 26 feet; beam, 7 feet 4 inches; draft at rest, 9 inches; draft at full speed, loaded, 3 to 4 inches. So well is she balanced that in taking the turns at high speed, she heeled inward and not outward, and this without slowing down for the turns.

It is interesting to note that the word "free bottom" is used to indicate the absence of appendages, such as propeller, rudder and water inlet scoop, which among other things, are found on the underside of the conventional boat. *Whistler* is distinguished by her freedom from any of the above, and a critical inspection reveals the fact that this feature, rather than the simple novelty of her air propeller, is the interesting part of her design.

Whistler makes no claims to remarkable speed for her size and power; she is capable of between 30 and 35 miles per hour. Neither does she pretend to be a sudden and sensational development, for the present craft is the result of over twelve years of experimental work with air driven boats of her type. Comfortable speed in a really useful boat which can travel in a minimum draft of water without sacrificing the advantages to be found in the best runabouts of her class, were the predominant thoughts in her design.

A western standardized runabout turned out by Stephens Bros., Stockton, Cal. She is a remarkably smooth running hull, and with a Scripps F–6 engine steps along at 30 miles per hour.

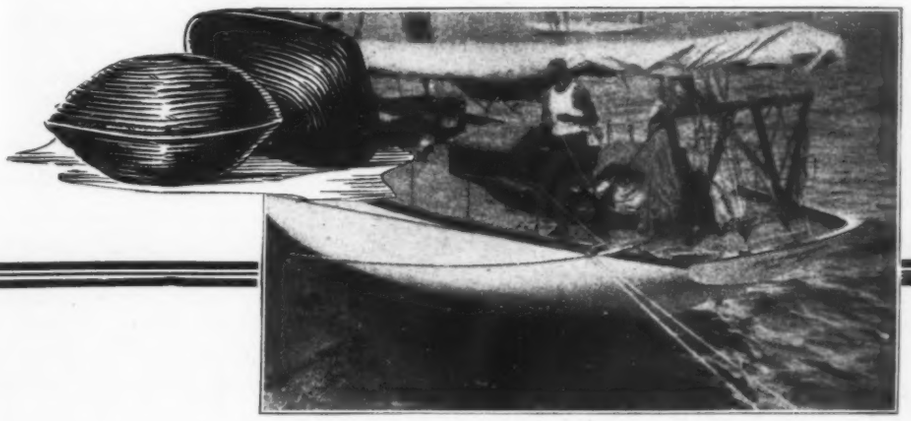
Scripps Motors on West Coast

That the builders and users of runabouts on the West Coast are fully alive to the merit of Scripps motors is shown by their adoption by Stephens Brothers, builders, of Stockton, Calif., for the different stock craft which they turn out. The Stephens standardized 39-ft. cruiser, with a beam of 10 feet and draft of 2 feet 6 inches, is powered with a pair of Scripps E-6 motors, which drives the boat at a guaranteed speed of 17 miles an hour. The Stephens runabout, 25 feet 10 inches overall and 5 feet 10 inch beam, is powered with either an F–4 or an F–6, at the customer's option, is guaranteed to do 25 or 30 miles an hour, although these speeds are exceeded in actual service.

The Palmer "Little Pal"

The new Palmer 12–15 h.p. "Little Pal" motor is one which is sure to appeal to boat owners whose installation space is small, and who want a clean, compact, and powerful power plant. Though developing a consistent 12–15 h.p., the 4-cylinder Little Pal is only two feet long from the front of the flywheel to the after end of the cylinder block; the flywheel diameter is but 14 inches; and it is only 42 inches from front of flywheel to the end of the shaft coupling, including clutch and gearset.

Little Pal is a beautifully designed job, and unusually accessible. The bore is 3", stroke 4", and it runs at from 1,000 to 1,400 r.p.m. It is especially suitable for installation in auxiliaries, shoal draft boats and runabouts. A full description may be had by writing to the Palmer Motor Co., Cos Cob, Conn.



Frank B. Draper at the wheel of his 58 foot cutter, *Flying Cloud*, in which he used Ford Charcoal Briquets on the New York to Nassau cruise.

Veteran Yachtsman *"Emphatically recommends"*

this New Galley Fuel

"Ford Charcoal Briquets are a Perfect Fuel"

says Frank B. Draper, following long cruise

The endorsement of Mr. Draper should carry weight with all yachtsmen. He is an experienced sailor who knows every cruising trick, and has expressed his opinion only after giving Ford Charcoal Briquets a thorough test on a long, deep-water cruise.

Ford Charcoal Briquets are made from northern hardwood charcoal, ground and molded into a dense, compact form. They are slow-burning and furnish intense heat. There are no clinkers, no dust, no fumes—and practically no ash.

They can be lighted with a few sheets of crumpled paper, and with a shut draft will burn for hours. Many users report that six hundred-pound bags of Briquets last as long as a ton of anthracite coal.

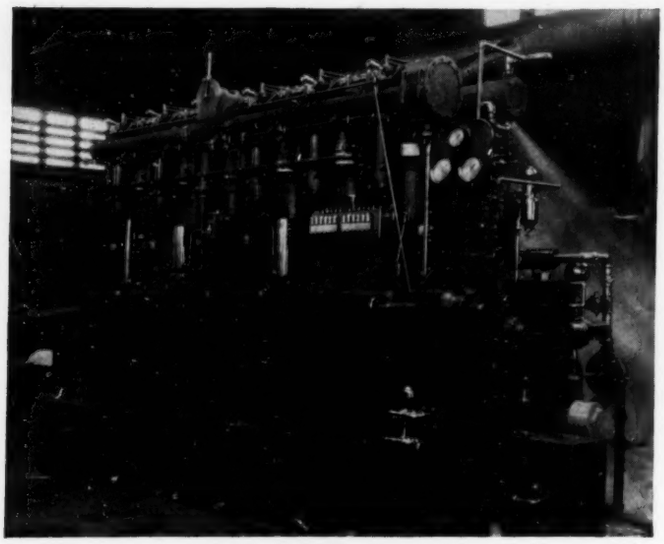
Any of the distributors listed below can supply Ford Charcoal Briquets. Try them in your galley stove. You will find them a wonderful heat-producing fuel—clean and economical.

Produced by

Ford Motor Company
Detroit, Mich.

Ford

BALTIMORE, MD.
Lyon-Conklin & Co., Inc.
BAY CITY, MICH.
Robert Gage Coal Co.
BOSTON, MASS.
Batchelder & Felton Coal Co.
BRIDGEPORT, CONN.
The Chapin & Bangs Co.
BROOKLYN, N. Y.
Chas. Schaefer and Son
BUFFALO, N. Y.
Chemical Charcoal Co.
CHICAGO, ILL.
Berger Bros.
CLEVELAND, O.
Goff-Kirby Coal Co.
DETROIT, MICH.
Viger's Coal & Wood Co.
DULUTH, MINN.
Duluth Ice & Fuel Co.
GLOUCESTER, MASS.
John Alden Coal Co.
GREEN BAY, WIS.
H. Danz, Jr.
MILWAUKEE, WIS.
F. Wittig & Co.
MONTREAL, QUEBEC
Charcoal Supply Co. of Quebec, Canada, Ltd.
PHILADELPHIA, PA.
Bell Charcoal & Coal Co.
PORTLAND, ME.
Randall and McAllister
TOLEDO, O.
Home Fuel & Supply Co.
TORONTO, ONT.
Charcoal Supply Co., Ltd.



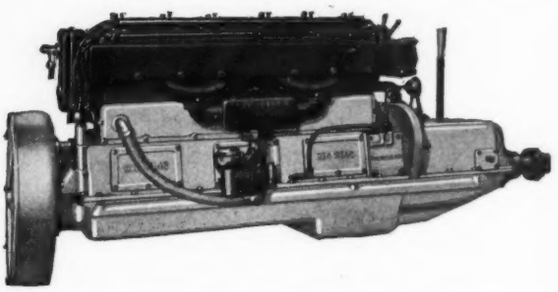
A Bessemer 6-cylinder direct reversible Diesel marine engine on the testing block. The new power cruiser *Athero II* is equipped with two engines made by this Company.

Red Wing Catalogue

The Red Wing Motor Co., of Red Wing, Minn., has just issued a new, handsome 24-page catalogue, in which are described the entire line of well known Red Wing motors, this being the first time the new BB-Six models have been officially announced. The Big Chief Six also appears in the catalogue for the first time.

The smaller 6-cylinder Red Wings are a notable addition to the output of this firm. These are the BB-Six, medium duty 50–75 h.p., and the BB-Six, high speed 80–110 h.p. Both have a bore of 4½" and stroke of 6", being of 573 cu. in. piston displacement. The medium duty engine has grey iron base and is arranged for speeds from 600 r.p.m. to 1,200 r.p.m., and is well suited for cruisers and commercial boats. The high-speed model has the special Saltax non-corrosive aluminum base, and operates at between 1,500 and 1,800 r.p.m. in fast runabouts.

All the Red Wings are beauties, both from outward and mechanical standpoints and their performance has exceeded all expectations, both as to power developed and velvety smoothness of operation, undoubtedly due to the extreme care in design and manufacture, and the use of only the finest materials throughout.



The new BB-Six Redwing Thorobred High Speed Motor rated at 80–110 h.p.

No More Seasickness

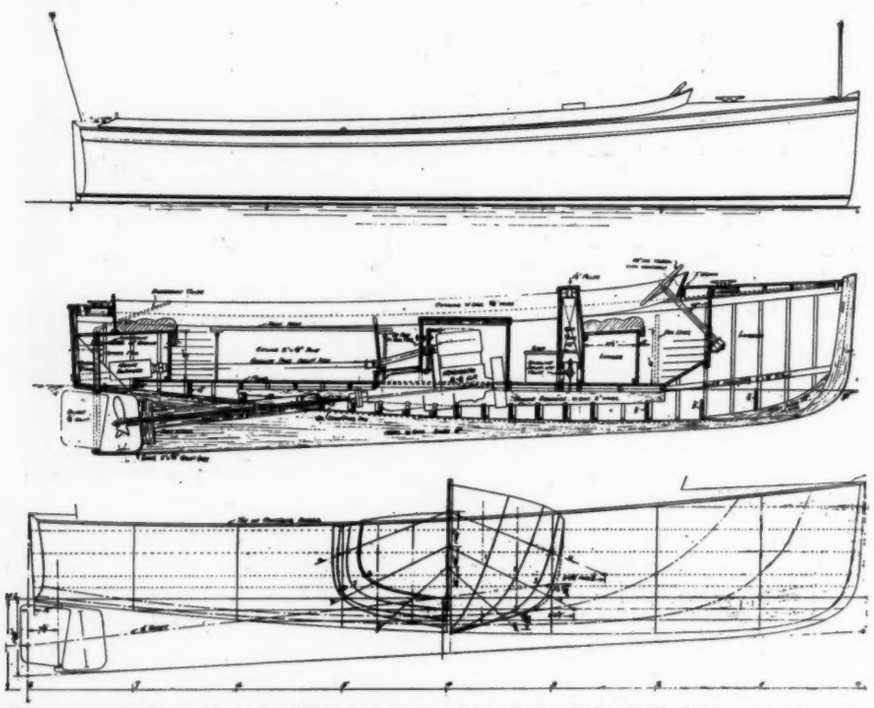
According to the testimony of many yachtsmen, seasickness is no longer a bugbear. All one has to do is to go armed with a small bottle of Seoxyl pills — and enjoy the roughest weather without a qualm. This preparation is absolutely safe, perfectly harmless, and leaves no after effects, and from all accounts, absolutely prevents seasickness or nausea. Seoxyl may be obtained at drug stores, or from the Seoxyl Sales Co., Ltd., Dept. F, 11 Broadway, New York City.

Bessemer Diesels are Popular

That the Bessemer Diesel Marine Engines manufactured by the Bessemer Gas Engine Co., of Grove City, Pa., are rapidly increasing their popularity is evidenced by the many yachts now being equipped with this type of power plant. The two Bessemer Vertical Diesels installed in Jesse L. Livermore's *Athero II*, develop a total horse power of 1600 at 250 r.p.m., and a duplicate installation for D. P. Davis' new yacht, illustrated in the May issue of Yachting, have recently been shipped to the Todd Shipyard, Brooklyn, N. Y. Both these yachts will be equipped with two Bessemer Diesel 60 h.p., 40 kw. generating sets. In addition to these big motors, many smaller engines are going through the factory as regular production in lots of 20 and 25.

Lux Fire Extinguishing System

The remarkably efficient action of Lux, the fire extinguishing system manufactured by Walter Kidde & Co., Inc., of 140 Cedar Street, New York City, was amply demonstrated in a recent series of tests held by the Italian Government on an Italian subchaser. The engine room of the subchaser was filled to a depth of about 8" with water, on top of which was poured some 25 gallons of high test gasoline. A bundle of burning waste was then thrown into the engine room, resulting in a big explosion and burst of flame. After fifteen seconds, when the midship section of the boat was a seething inferno, the Lux System went into action, controlled by those still on board. The flames instantly disappeared, the official timekeeper pronouncing complete extinction in one second. The official witnesses, to a man, declared they had never heard of, nor believed possible, the instantaneous extinction of a fire of such magnitude.

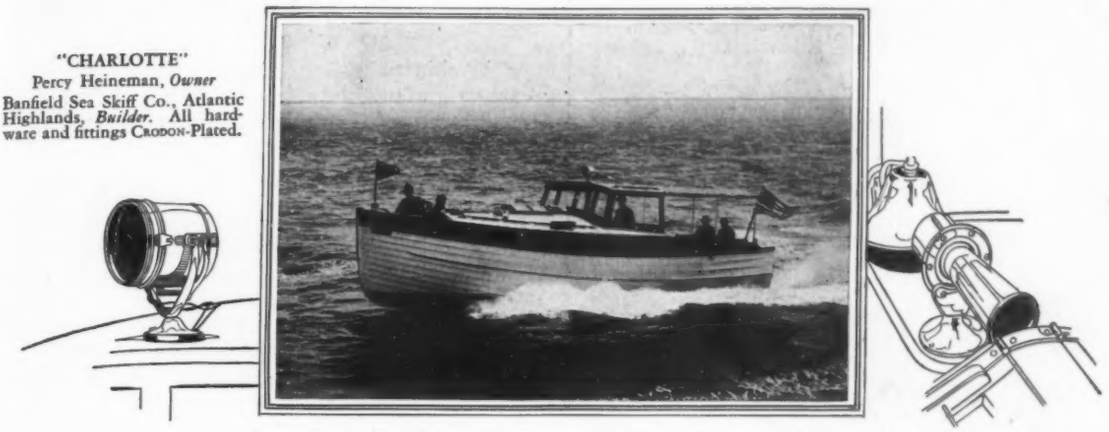


Plans of a small runabout for fishing and general use designed by J. G. Alden and powered with a 6–8 h.p. Kermath Motor.

A Roomy Fishing Launch

An able, dry and comfortable little launch, suitable as a tender or fishing boat, is shown in the accompanying plans from the board of John G. Alden, of Boston. The lines are easy yet powerful, and the well-protected propeller makes the craft well adapted to shoal water work. The flexibility of the 6–8 h.p. Kermath makes it ideal for trolling. Anyone wishing to build this boat may receive complete building plans free, from the Kermath Mfg. Co., Detroit, Mich.

"CHARLOTTE"
Percy Heineman, *Owner*
Banfield Sea Skiff Co., Atlantic Highlands, *Builder*. All hardware and fittings CRODON-Plated.



Happy Days!

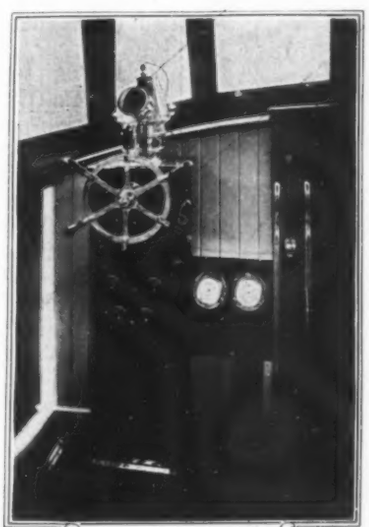
BRIGHT WORK BUT NO POLISHING

TO speak of no metal polishing at sea seems like an idle dream. Yet it has become a reality, for within the last eight weeks CRODON finish has been installed on eleven yachts and large power boats for the binnacles, ships' bells, searchlights, hardware and other bright work.

CRODON is the trade name of the chromium alloy electroplate applied as a surface coating by the Chemical Treatment Company, or its licensees, to many types of metal products to improve their appearance and make them proof against tarnish and corrosion.

Its unusual beauty permits of no confusion with ordinary finishes. It is available either in a brilliant, mirror-like surface or in a soft silvery satin.

Since CRODON never tarnishes nor corrodes, it never needs polishing; an occasional wiping to remove grease or other foreign matter keeps its beautiful lustre unchanged. CRODON is the ideal finish for marine hardware and fittings. Moist air, salt atmosphere and salt water have no effect on it.



Moist salt air will never tarnish these CRODON-Plated Controls

It has been submitted to salt-spray tests for over 300 hours without showing any signs of wear, physical breakdown, tarnish or corrosion. This is equivalent to several years of service.

If you are interested in eliminating the expense and the labor of keeping the metal work on your boat clean and bright, investigate CRODON. If you cannot arrange to see our marine display at 26 Broadway, New York City, send the attached coupon for our special booklet on CRODON for Marine Hardware and Fittings.

Specify CRODON *for:*
Ships' Bells, Binnacles, Binnacle Stands, Reverse Levers, Cleats, Clocks, Engine Room Telegraphs, Capstans and Windlass.

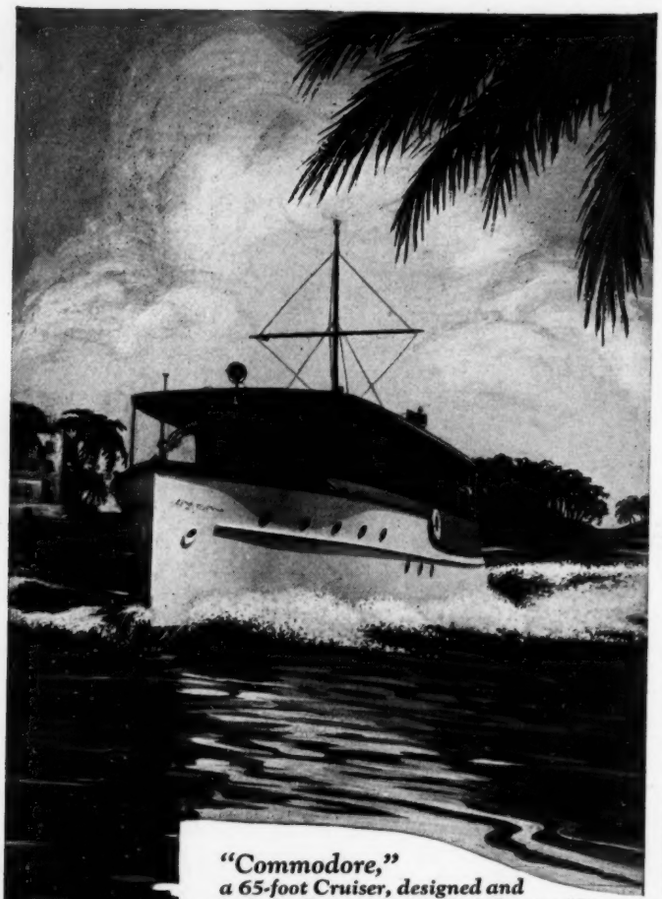
CRODON
The Chrome Alloy Plate Applied Only to Quality Products
C T

Specify CRODON *for:*
Electric Fans, Port Lights, Steering Wheels, Searchlights and Reflectors, Plumbing Fixtures, Door Hardware, Exposed Pipes, Rails and Hinges.

Chemical Treatment Co., Inc., Dept. M-2
26 Broadway, New York City

Gentlemen: Please send me your booklet "CRODON for Marine Hardware and Fittings."

Name.....
Address.....
City..... State.....



"Commodore," a 65-foot Cruiser, designed and built for Commodore A. A. Schantz of Detroit

A REALLY fine pleasure boat embodies so many elements of proper design and construction that unusual experience as well as extensive facilities are required to assure success.

Consolidated for more than 40 years have produced types of fine pleasure craft complete in every detail.

Designers and builders of Motor Yachts: North and South Cruisers: Day Cruisers: House Boats: Runabouts, and the celebrated Playboat.

Write for literature on the class of boat you have in mind.

The Commodore is equipped with two model MR Speedway Engines giving a speed of 16 miles per hour.

CONSOLIDATED SHIPBUILDING CORP.
MORRIS HEIGHTS NEW YORK CITY

Escapades of the *Eleanor*

(*Continued from page 36*)

even in this twentieth century, South Sea sailing is not greatly different than it was when Captains Cook and Magellan sounded their laborious ways through these same latitudes.

Gradually that fine northerly wind died away until the log got into a habit of reading like this:

Friday, Nov. 14th — Sighted light on Celebes coast at three A. M. Wind failed at noon, and now, 3:30, we've lost all the 11 miles gained through five squalls this morning. Tide rip taking us northeast.

Saturday, Nov. 15th — Spent whole day trying to get away from that light. Ended up somewhat farther away from Makassar than before and still within the baleful gleam of the light.

Sunday, Nov. 16th — This makes 48 hours in one place. Skipper spent the morning alternately singing hymns with the Victrola and using ultra-religious language in connection with uncomplimentary remarks about Straits weather.

So things went.

On November 18th we crossed the Line. The days passed with anywhere from none to 15 squalls distributed impartially through waking and sleeping hours. In the intervals we shot the sun and immolated reams of paper perfecting our navigation. Eventually, 19 days after leaving Sandakan, we buzzed merrily into Makassar, rejoicing in the capture of a 50 pound barracuda taken on the trolling line on the way in.

The sea-weary little boat was an object of great interest to Makassarites who treated us with unfailing thoughtfulness throughout our stay in their immaculate city. The Harbor Master berthed the *Eleanor* in the municipal Prauhaven, which will always stick in my memory as the finest small boat shelter I've ever seen. The praus, fantastic, high-pooped vessels flying an amazing number of staysails, are the native fishing and trading boats that think nothing of venturing on thousand-mile jaunts to Singapore *sans* any of the navigational aids we hold so essential. What's more, they make their destinations.

Entertainments, trips into the beautiful Celebean hinterland via bicycles, and Mac's futile struggles with the engine, which he completely dissected in his efforts at diagnosis, kept us longer at Makassar than we had planned. When we did sail it was off on another side-trip at the insistence of our Dutch friends who united in singing the praises of Bali, a tiny island at the eastern tip of Java. To Bali we were bound.

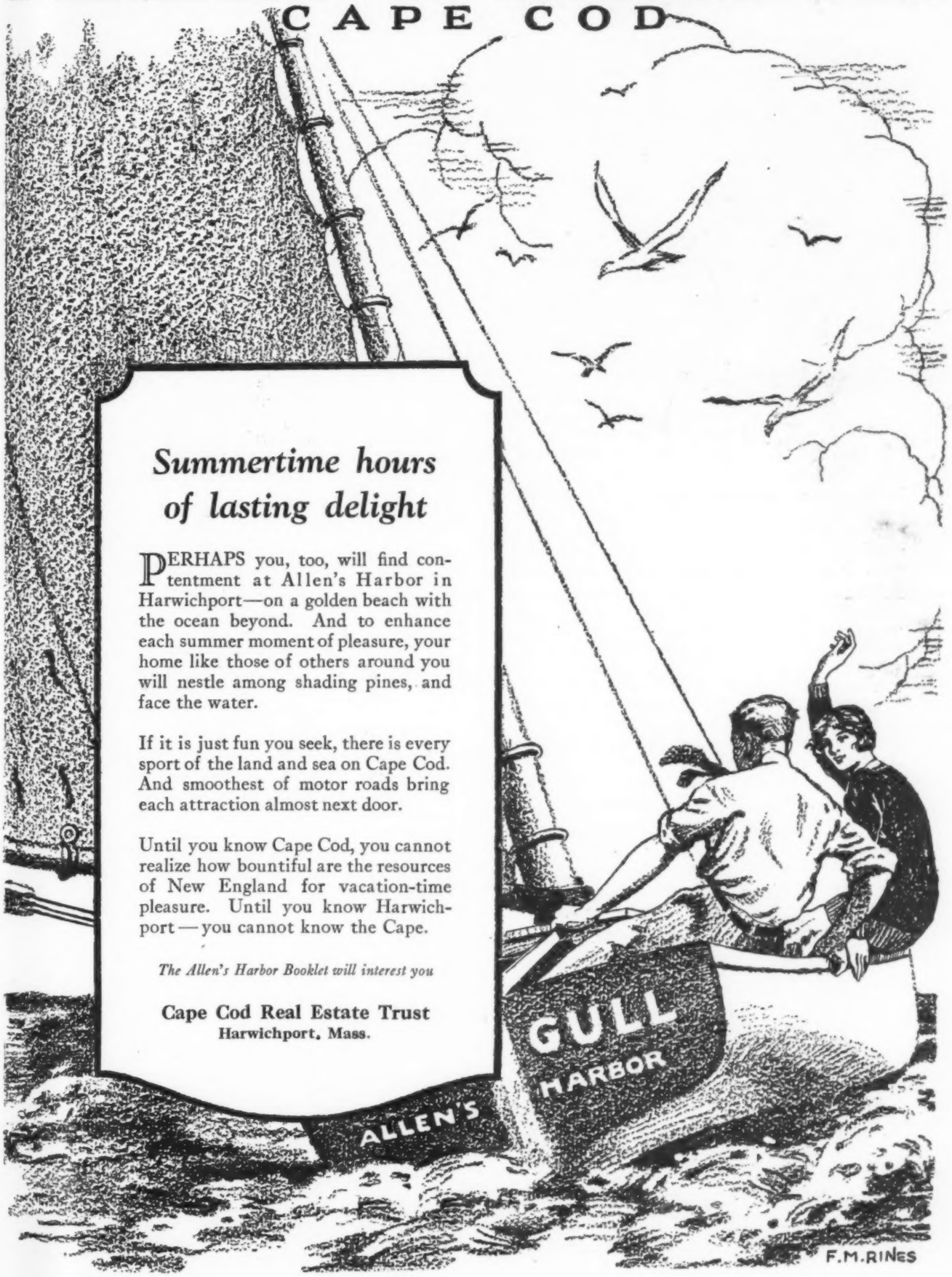
Our plans for a Christmas dinner in port went glimmering the first day out of Makassar when more calms were encountered. The big day was heralded by Jack's stentorian "Merry Christmas! Now, you birds, get that mainsail off damn quick! Here's a black'un!" Accordingly we got in the mainsail, whereupon the black'un disappeared utterly.

Constancio outdid himself to supply as elaborate a dinner as the yacht afforded and we dined to surfeiture on curried chicken and fried chicken, Dutch sausage, mashed potatoes, rice, tea, jam, and biscuit. Later, Jack broke out an accordion acquired through the Skipper's propensities for bargains of any kinds, and ruined the afternoon trying to learn to play the thing.

The calm held. New Year's eve found us lying motionless at the entrance to Lombok Strait, Bali close on the starboard bow, Lombok's 12,000-foot volcano rising sheer on the port bow. I went for a swim from the bobstay and thought nothing of the interest in me displayed by two rather pretty fish that kept me company until the Skipper sauntered forward and informed me that I was playing with two not inconsiderable tiger sharks who *might* get hungry if I waited long enough. I got my towel.

Lombok Strait is only 70 miles long, but sailing ships

ALLEN'S HARBOR
CAPE COD



Summertime hours of lasting delight

PERHAPS you, too, will find contentment at Allen's Harbor in Harwichport—on a golden beach with the ocean beyond. And to enhance each summer moment of pleasure, your home like those of others around you will nestle among shading pines, and face the water.

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Until you know Cape Cod, you cannot realize how bountiful are the resources of New England for vacation-time pleasure. Until you know Harwichport—you cannot know the Cape.

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A heavy duty-*portable boat motor*

Johnson Big Twin
For heavy duty boats. Also for auxiliary and speed boat use.
Price $195
[with bronze lower unit, *Price $205*]

FOR heavy duty boats—work boats, commercial fishing craft and the like—the Johnson *Big Twin* is particularly adaptable.

Weighs but 85 pounds. As a portable power unit it can be taken from one boat and applied to another—easily, quickly. In such instances as a general utility motor it is ideal for harbor service.

It is sturdily constructed throughout. It has *power*—6 full brake horse-power—that will send a large boat through rough waters and strong tides at a speed that surprises the most experienced boatmen. It will keep its course—*against the wind.*

Full Pivot Steering is a feature giving wide maneuvering ability to the *Big Twin.* You steer with the motor itself—there is no need of a rudder. Thus, you have *full power* or any part of that power, in whatever direction you're heading. Other superior mechanical features are a *Pressure-Vacuum* cooling system, which eliminates any need for a pump; *Quick-Action Magneto* for quick starting; *Float-Feed Carburetor* of the Automobile type, and *Automatic Tilting.*

Any Johnson dealer will let you take a Big Twin for trial. Write for name of our nearest dealer. Sold on payments if desired. Send for catalog with full information.

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Johnson
Outboard Motors

WORLD'S LARGEST MANUFACTURERS OF OUTBOARD MOTORS

have been known to spend seven weeks vainly trying to get through against baffling winds and currents. The safest practice, the sailing directions said, was to go southward through Bali Strait, between Bali and Java. That meant almost circumnavigating the island to get to Benoa, the only safe harbor the island boasts, on the south coast, so, New Year's morning, 1925, bringing a splendid northerly breeze, we decided to chance Lombok.

Everything went well until mid-afternoon, when the wind dropped just as we sighted our haven. With sunset came the flooding tide and a current that made our Tapaan Passage adventure look tame indeed. Again we heard that grumbling roar of the approaching rip and again the *Eleanor* was seized in the playful grip of mad waters churned to frenzy as they ricocheted over the serrated bottom which, from a depth of 1,200 fathoms, rises suddenly to 200 and then as precipitately drops to 1,500 just a stone's throw away. The vast bubblings and boilings reminded us forcibly of the disturbances caused by the deep explosions of depth bombs, and their action on the ship was most bewildering. Sideways, backwards, forwards, every way a ship could go, we were tossed and spun and hurried. A night so black it was velvety soft settled over us, hiding completely the land perils we knew were all about. Round and round, dizzily, we spun until it was almost impossible to get our bearings, so confused were we. This lasted until past midnight when a ripping thunderstorm came out of the south and gave us way.

When the bright, lovely morning came Bali lay faint and blue on the horizon, a good 20 miles to the north. We had been thrust 35 miles out into the Indian Ocean by that wild rip.

Late that afternoon, riding daintily and gloriously over some of the longest and laziest ocean swells I've ever seen, we tacked in through the tortuous Benoa Channel and came to anchor alongside a Chinese junk that was discharging blue and white crockery brought from distant Singapore. At last we'd made Bali.

(To be continued)

The Voyage of the *Bounty's* Launch

(Continued from page 40)

them for the night. They took the precaution, however, to set a watch, and to have half of the party sleep in the boat to guard against surprise. In the morning everyone was keen for something to eat, and being refreshed by the night's rest, searched for food, which they found in plenty in the way of rock oysters, and best of all, there was water in abundance. A copper kettle was produced from the boat, a fire was kindled with a magnifying glass, and they all set down to a pint of oyster stew each, which was reported not to be so bad. This diet would hardly have been prescribed by a physician as their first meal, but they stood it. All hands had pains in the joints from wet and exposure and knocking about in the boat. In addition the most of them suffered from dizziness, headache, and loss of sight, as well as a violent tenesmus. Except for bailing most of them had had no exercise since leaving Tofoa.

On entering the passage through the reefs the lower rudder gudgeon, which was a strap on the rudder itself, carried away, and was lost. Again luck was with them, for in the heavy following sea in crossing the Pacific, it is doubtful if they could have held her before it with a steering oar. A staple that answered the purpose was found in the carpenter's kit, and this saved the use of the rudder for the rest of the voyage.

There was 170 miles of sailing inside of the Barrier to Torres Strait, the inlet to the Arafura Sea, from which it would yet be over 1,100 miles to Timor, and renewed preparations accordingly were made for this last long stretch. At Restoration Island the launch was watered to

"The Motor That Crossed the Atlantic"

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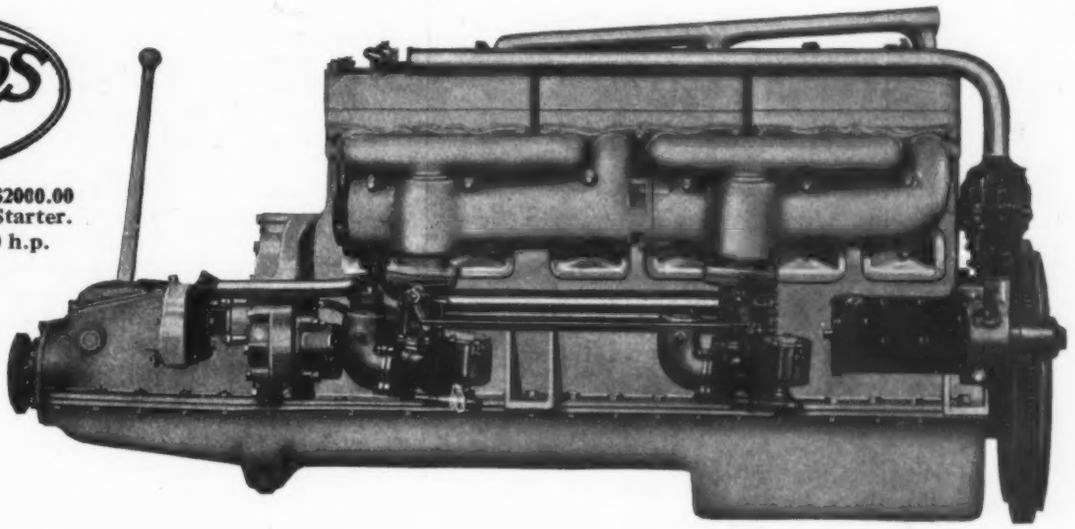
Other sizes 10 to 150 h.p.



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¶ For this reason, naval architects, boat builders, and yachtsmen have learned to look upon SCRIPPS announcements with absolute confidence.

¶ The G-6 is the newest addition to our line. It reflects the experience gained in satisfying the highest mechanical ideals for two decades, coupled with the advantages of the latest scientific advancement. Regardless of price, there is nothing finer to be had.

¶ Install a SCRIPPS of any size or model, from 10 to 150 h.p. in your boat and you will realize the highest sense of motor enjoyment and performance for years to come. Note how seldom you ever see a used SCRIPPS engine in the "For Sale" columns. It's because they make good and last.

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" *F-4*	40-60 h.p.	750.00
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FORE AN' AFT is edited by William Atkin. It is not a newspaper—it is not a trade paper—it is not a paper covering the field of large yachts—it is not a racing boat paper—it will not mix editorial contents with advertising matter—it is not controlled by advertisers, nor is it under obligation of any kind to advertisers—it will not stretch the truth, or publish the commonplace—it has no history to be ashamed of; nor shall it ever.

FORE AN' AFT is owned and published by boat owners and cruising men. The publishers believe that there are thousands of owners of small craft who will welcome it. And so if you love any kind of small boat the lines below will interest you.

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capacity, which was 60 gallons. As they were leaving, after three days of rest and recuperation, twenty natives came running down on the opposite shore, waving their spears and shouting for them to come over. As they had no canoes, Bligh sailed in close enough to make note of their hair, color of skin, extent of costume, kind of weapons and expression of their faces.

In the sheltered waters behind the reef the quiet sailing gave them additional rest. Supplies in the way of clams and sea birds were picked up by shore parties which landed where the picking looked good. The clams were sliced and dried, while some of the birds were "half dressed" for use after leaving land. An amusing thing happened on one of the bird hunting expeditions. One of the party returned to the boat without his expected quota of birds, and it was found that he had eaten nine on the spot where he had caught them, which made Bligh so mad that he thrashed him for breach of duty.

On June the 4th, the launch passed through Torres Strait and once more into the open sea. The weather soon began to cut up its old tricks, with fresh gales from the E.S.E., and a very high sea. Then the reduced vitality of the crew began to show under the renewed exposure to wet and cold, and some of them sank rapidly.

In six days the weather moderated, and after another day, Bligh's reckoning told him to expect to sight Timor at any hour. At 3 A.M. on June 12th they made out the loom of a high island they knew was Timor. The launch was hove to until daylight and the island was skirted for a harbor. Bligh only had a faint idea that the settlement of Koupang was somewhere near the S.W. corner of the island, and this they made on the following day. Here ended the voyage of the *Bounty's* launch, 41 days from Tofoa.

The launch and her crew were well treated by the Dutch Governor, who immediately made preparations to send them home by the way of Batavia. But exposure and suffering were to take their toll of five lives. Mr. Nelson died of a fever before they left Koupang. He was the scientist attached to the expedition. William Elphiston, the master's mate, and Peter Linkletter, the quartermaster, died in Batavia. Thomas Ledward, the acting surgeon, and Robert Lamb, the butcher, died on the passage home.

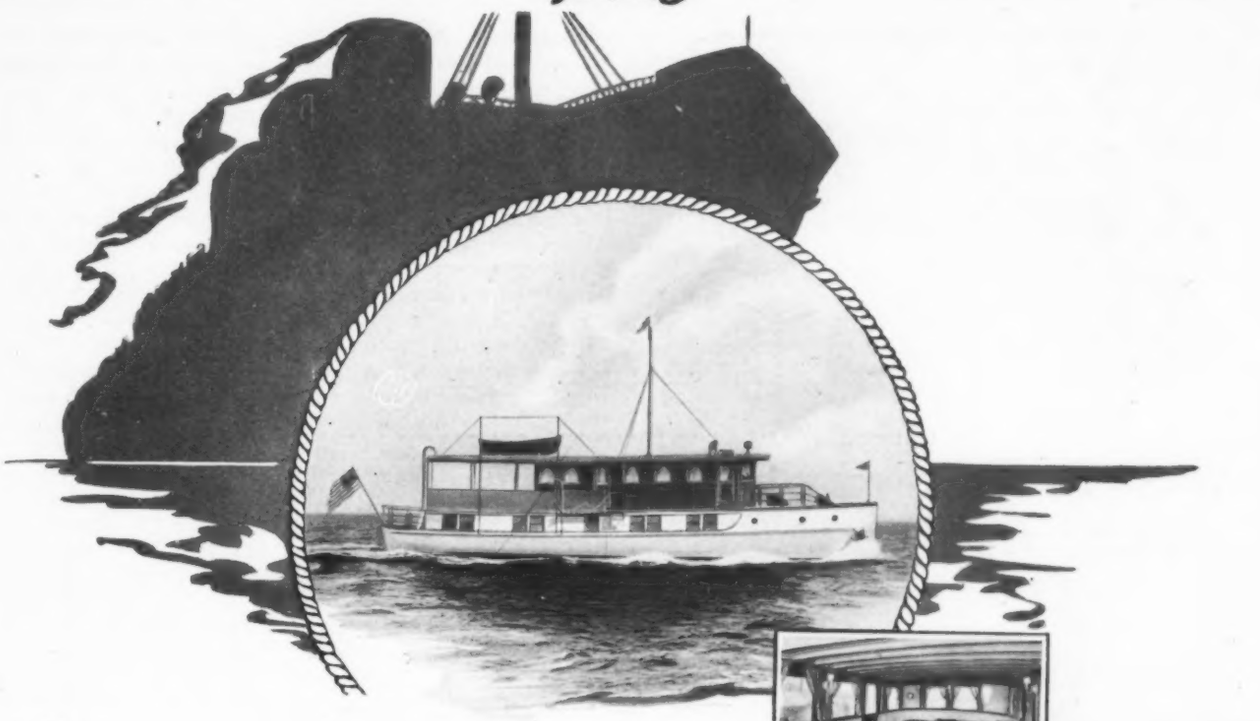
Sailing an Inland Lake Scow

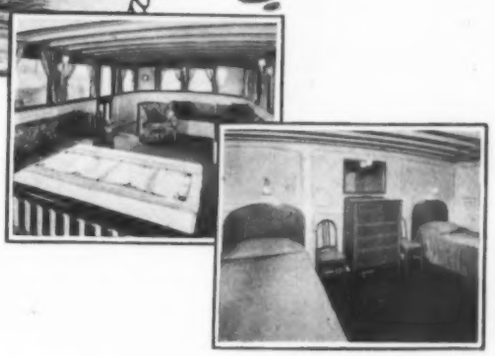
(*Continued from page 43*)

and the apparent wind is of no practical value, but it is interesting to note that the angle is appreciable and that its magnitude is some index as to the amount which the sails of a scow must be trimmed as the boat gathers speed. With a 25-mile wind, for example, coming 30 degrees abaft the beam and driving the scow at its high speed of 15 knots the wind would appear to come from a direction 6½ degrees forward of abeam; that is, it would swing forward 36½ degrees. With winds further aft or with slower boat speeds the apparent wind would, of course, not be as far forward. The immediate effect of the wind's pulling ahead is to make it necessary to trim the sails flatter, and failure to observe this requirement is one of the principal reasons why some skippers have difficulty in prolonging the "planing periods" of their boats.

The scow is fast on any point of sailing whenever there is a breeze, but its speed with eased sheet in a hard wind is phenomenal and offers the most thrilling and spectacular touch to scow racing. To make the scow plane it is necessary — but step aboard a moment and see for yourself how it is done.

We'll tack up to windward to that buoy and then run off with the wind on our starboard quarter. It will be about four points abaft the beam when we straighten out on our course, but watch it pull abeam as we get up to speed, and notice that we have to trim our sails accordingly. Here's the buoy to port now; ready about —





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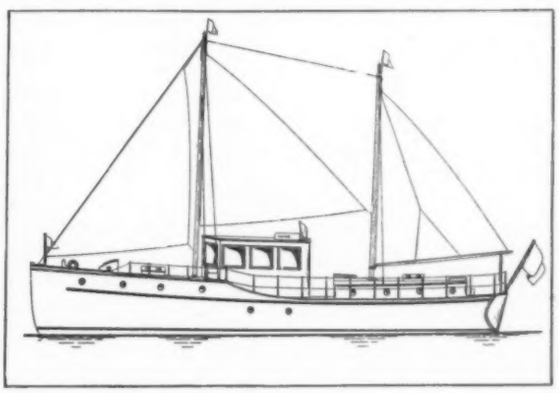
It has the luxury, the comfort, the seaworthiness associated with the "greyhounds" of the Seven Seas.

Built of the finest timbers — designed by an architect whose crafts are known the world over — decorated and furnished by a well known New York firm.

There has been no expense spared. Yet, you benefit by the economy of shipbuilding in Maine.

The entire boat when delivered is completely equipped.

You will better appreciate the unusually low price of $37,500 (with twin screw, $40,000) after you have read the well illustrated booklet which will be sent upon request.



ARRANGEMENTS to go aboard the sister Houseboats *Vitesse* and *Rascal* have been made with the owners. Both craft, now in New York waters, are duplicates of the one pictured above. But permission to go aboard must be secured through Staples, Johnson & Co., preferably on your letter-head stationery.

This Houseboat is best suited to the Atlantic Seaboard and such inland waters as Lake Champlain.

The Deep Sea Cruiser, shown below, was designed by William H. Hand, Jr., for the utmost in seaworthiness at a moderate price. It will cruise with luxurious comfort in every corner of the world — any distance in all weathers. It is especially well adapted for such inland waters as the Great Lakes.

Should your requirements vary from either of these two types, we would be glad to figure on your own specifications or cooperate with your architect.

In any event, it will be worth your while to send for particulars on the craft shown here. There is no obligation attached.

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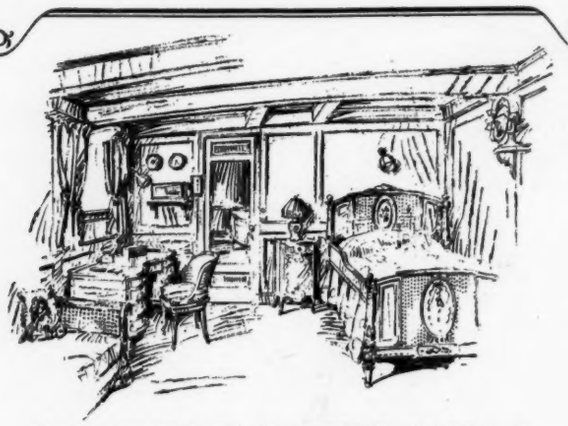

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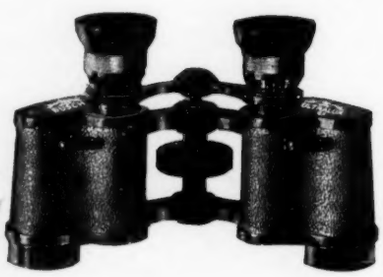

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Illustrated Pamphlet No. 42 on request

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hard-a-lee! Away goes the jibsheet as the tiller is put down and the bow swings into the wind. The helmsman has taken the main sheet and lets it run as she pays off; the sheet-tender has lowered the port bilge board about half way and is cleating the starboard backstay before pulling up the starboard board. The jibsheet man has climbed over to windward and has made his sheet fast, and is now taking the spinnaker boom forward. Now, up there, mainsheet man, and hoist spinnaker; and take the sheet while the jib man sets the boom and the helmsman holds a turn on the after guy. There she draws, all pulling. Work aft now, and watch this puff; we're making 8 knots but we want 12 at least.

The mainsheet man (his title is deceiving for he has many other important duties) puts a strain on the lee bilge board fall and just before the puff strikes the sails the skipper pulls the tiller up enough to start the bow swinging off. The man on the board gets his chance; the board comes up, the puff strikes, we heave on the mainsail and give a tug on the spinnaker, while the skipper lets the tiller go free for a moment; the boat lifts and leaps forward, out on top — what is there to stop her? We seem to be riding on air, a soft cushion of foam; and making 14 or 15 miles an hour. Look astern at that deep V-shaped groove ploughed in the water; that's what one little rudder does — a tremendous drag, but unavoidable. Now give her a little board, just enough to make her hold on; and keep working the sails, heaving as we top a wave and easing off again afterwards. The skipper shoots her off on the wave tops and works her back again whenever he can; a lot of leeway, but anything to keep her planing. But we're beginning to drag a bit — settling — going to stop — stopped! Only an ordinary 8-mile pace now. So watch for another puff and we'll do it all over again — and keep her going this time.

Not every day is a planing day, and speed to windward means as much in a fleet of scows as in any other racing class, but if the crew of one boat can "get her out on top" once or twice when the other boats are not planing, their boat can lose a good many yards on the windward work and still come home the winner. So whatever you say of a scow, don't say that "off the wind there is little for the crew to do!"

Some Gulf Stream Navigation

(*Continued from page 46*)

prime vertical I shot another series and worked them up. I was not surprised when they put me 40 odd miles too far east. To be sure, the correspondence was not exact but that did not bother me, since our drift during the night had been conjectural. Moreover, I was positive of the soundings, sure of the latitude within a very small margin of possible error, and practically certain as to the steamship's track. The intersection of all three at F was too striking to admit of doubt. We tacked ship at 8:30 and made Beaufort entrance buoy right on the nose.

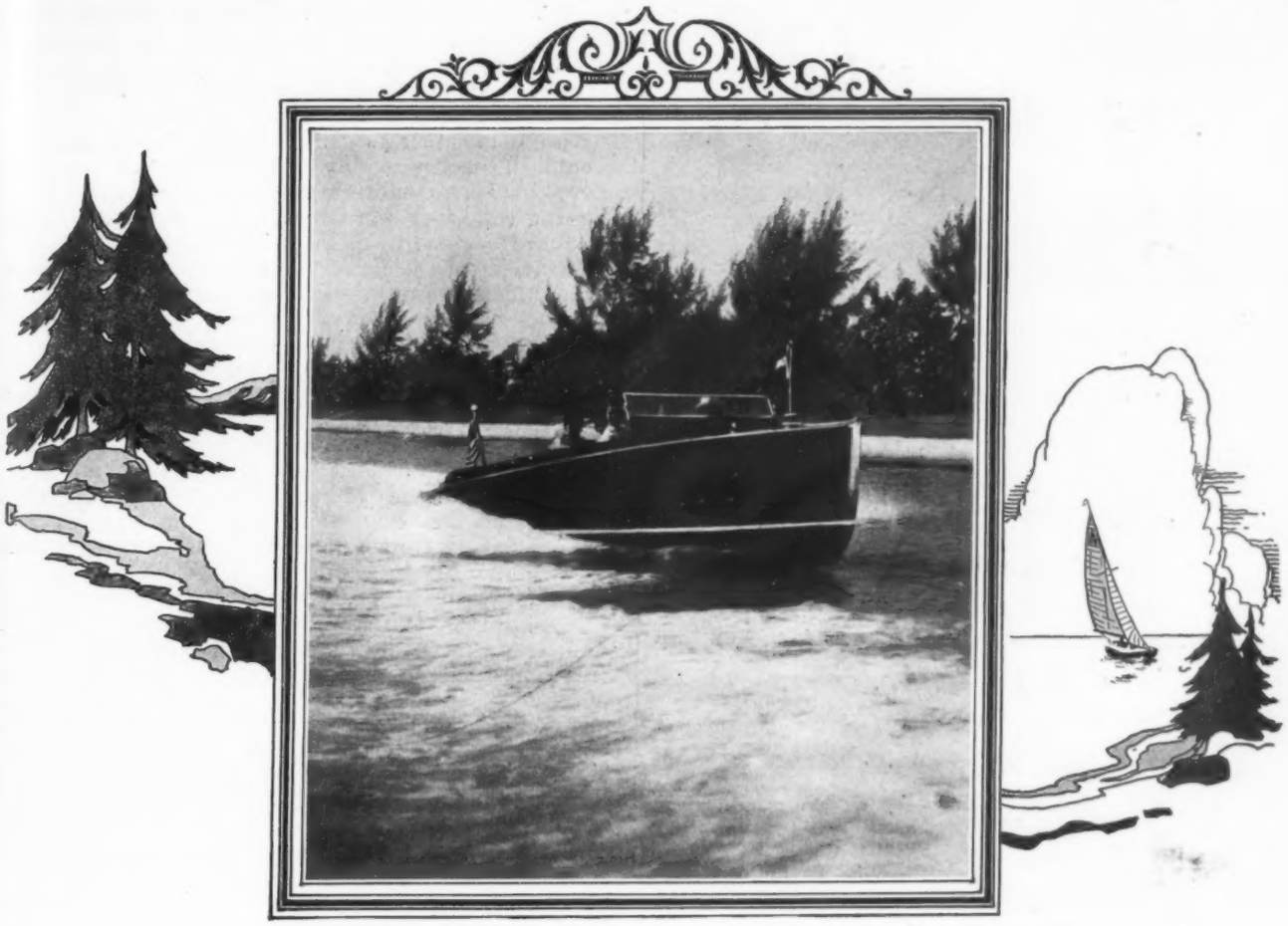
Since reaching Norfolk Hank has had the clock overhauled and found that its error was as indicated by the last set of sights. He is at a loss to explain it, as it was a good instrument and had been carefully rated. But anyhow, that is not the point. The lesson of this little experience, as I see it, is not to trust implicitly to anything you cannot check up. And in that connection I recommend the good old meridian altitude sight as something that will give you one line of position, your latitude, independent of the clock. You can hardly go wrong on it if you try.

Engine Room Ventilation

(*Continued from page 44*)

craft are so serious as to justify every possible precaution.

As to the size of cowl ventilators required, and referring



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WHILE speed has an irresistible appeal to the motor boat enthusiast — beauty of line and appointment are equally essential to the satisfaction of the owner. It is in its entirety — its individuality — rather than in any particular detail that the Baby Gar exerts its greatest attraction.

The BABY GAR is as easy to control as an automobile. Equipped with the famous Gar Wood Marine engine, it has one horsepower for every 3½ pounds of weight. It is the favorite of the best known sportsmen of America and Europe.

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to our 5 x 6 inches hypothetical engine, we find that a duct 5 inches in diameter will supply the required 60 cubic feet of air per minute at a velocity of about six miles per hour; another similar one will take care of the air in the engine room, completely replacing it once every six minutes; or a single duct 7½ inches in diameter will accomplish the same result. So much for pure figures and theory, but — a condition will arise when, with a light following wind, our relative six miles per hour air speed will drop to zero. In this case we are entirely dependent on the height of the stack and the heat produced by the engine, plus suction at the carbureter, to supply our engine room with the required 120 cubic feet of air per minute; therefore we must have larger ducts. Two 6-inch will do very well. Of course, if we have no stack, they must be larger still. Without a stack, however, we would be constrained to resort to forced draught to insure complete ventilation under this light following wind condition. To obtain the best results from a stack it should not be fitted with rain traps. Rain traps do not always keep out the rain, and they do always impair the draught. Some form of shield or trough fitted well below the stack opening, with an outboard drain, is best. When the boat is at anchor, or not in use, a chimney cap will keep the rain out and still allow sufficient ventilation.

An hour's methodical study with a cigarette, two or three cheap thermometers, and a sheet of stiff heavy paper, in the engine room while under way, will be more enlightening than all the theory available. If your engine is provided with a tachometer, the experiment will be all the more interesting. Whatever arrangement you have, place one thermometer by the air outlet (stack opening, skylight, port, or hatchway), another at the air inlet (cowl, doorway, port, or companionway), and another at the hottest place in the engine room, usually that part of the exhaust pipe which is next to the exhaust manifold. The cigarette smoke will show the flow in various parts of the room. (N.B. Light your cigarettes on deck!) Now, with the sheet of paper direct the incoming air downward to various levels, at the same time noting the revolutions and temperatures. About five minutes will be required to show the results of each change. It will generally be found that the area of the outlet should be about six times as great as the area of the inlet; that is, cross-sectional area at the most restricted point.

Some engine rooms are not provided with any outlet whatever, in which case, cutting a hatch or skylight opening, or better still, fitting a stack directly over the hottest part of the engine, will almost invariably produce amazing results, the most obvious being increased r.p.m., cooler, drier, and more breathable atmosphere in the engine room, and a much diminished tendency of the engine to stall.

In auxiliaries the problem of ventilation is often far more difficult than in motor boats, nevertheless the same general principles apply. In many cases it is impossible to create a natural draught, but a small belt-driven fan of the size and type used on the smallest automobiles, or a very small electric fan, will do the trick. Of course, there must be an *inlet* and an *outlet*, so disposed in relation to the fan that there will be a continuous flow of air. Stirring up the air in a confined space is not ventilation, although it may feel cooler to the human body. Where the engine is installed under a short bridge deck between the cabin and the cockpit, ventilation often may be vastly improved by a large swing port in the forward wall of the cockpit. Unless the engine is very low down in the hull and very far aft, a grating in the cockpit floor is of little or no use.

A little study and a little experimenting can transform a dark, stuffy hole into a well ventilated engine room, for a nominal sum, thereby improving the performance of the engine and reducing the fire hazard to a remarkable degree.

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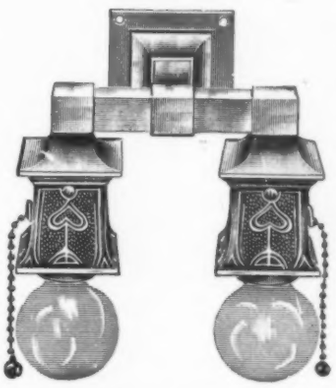
All Standard Screw Bases

An attractive fixture projecting 3¼" and finished in dull brass, thus harmonizing with almost any interior.
Pull chain socket.
No.153 List $6.00



This double fixture lends charm and a knowledge of good taste. Stock finish, old copper. Pull chain socket.
Projection 4½".
No. 84 List $12.00

A period style fixture suitable for either formal or lighter moods of decoration. The projection is 5¼". Pull chain socket.
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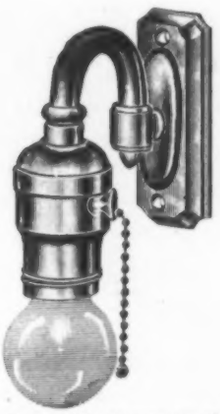
A shallow, two-light dome of delicate design with a frosted shade and a dull brass rim. Drops 4 inches and takes standard twin-base lights. Pull chain switch.
No. 309W. List $14.00

The ever popular husk-type fixture with just enough design to banish severity and lend itself to flowing draperies. Finished in dull brass and having a 3½" projection.
Pull chain socket.
No. 172 List $6.00



A low-priced fixture in the well-liked oxidized brass finish. Projection 3½".
Pull chain socket.
No. 153W. List $6.00

Here is an old copper item with just enough difference in design to please the discriminating. Projection 4½".
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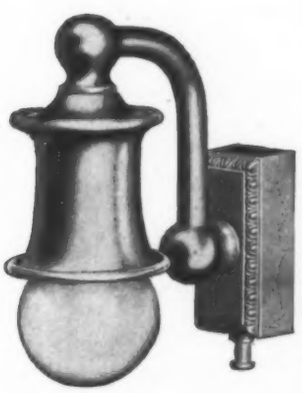

A most delicate pattern, particularly for staterooms with a colonial touch. Projects 5¼" and has a dull brass finish.
Push button socket.
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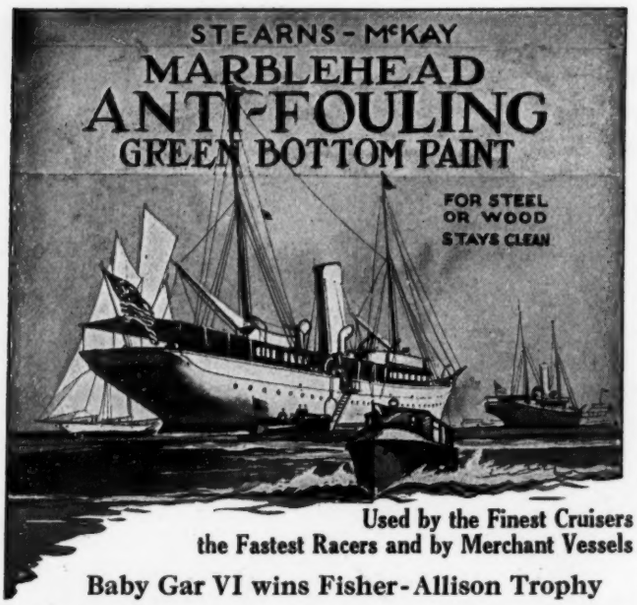

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Yachting Season in Full Swing on the New England Coast

(*Continued from page 48*)

other is the famous Brooklyn Challenge Cup race, which this year will be from Marblehead to Gravesend Bay by way of Cape Cod, Nantucket Sound and outside of Long Island. The New Rochelle Yacht Club has challenged with the *Azor* for the Brooklyn Cup, and the sloop *Bonita IV*, owned by Dudley Smith of the Corinthian Yacht Club, which won last year and which now carries a Marconi rig, will defend. Another challenger will probably be the *Butterfly*, representing the American Yacht Club.

But Maine is more interested in yacht building than in yacht racing, and the launching of the 1926 fleet from a dozen yards has held public attention. The *Malabar VII* was the first to leave a Maine yard, but others followed fast, including a score or more of other Alden boats as well as productions from the drawing boards of Samuel S. Crocker, Jr., Ralph E. Winslow and William H. Hand, Jr.

A Western Ocean Passage in the *Jolie Brise*

(*Continued from page 30*)

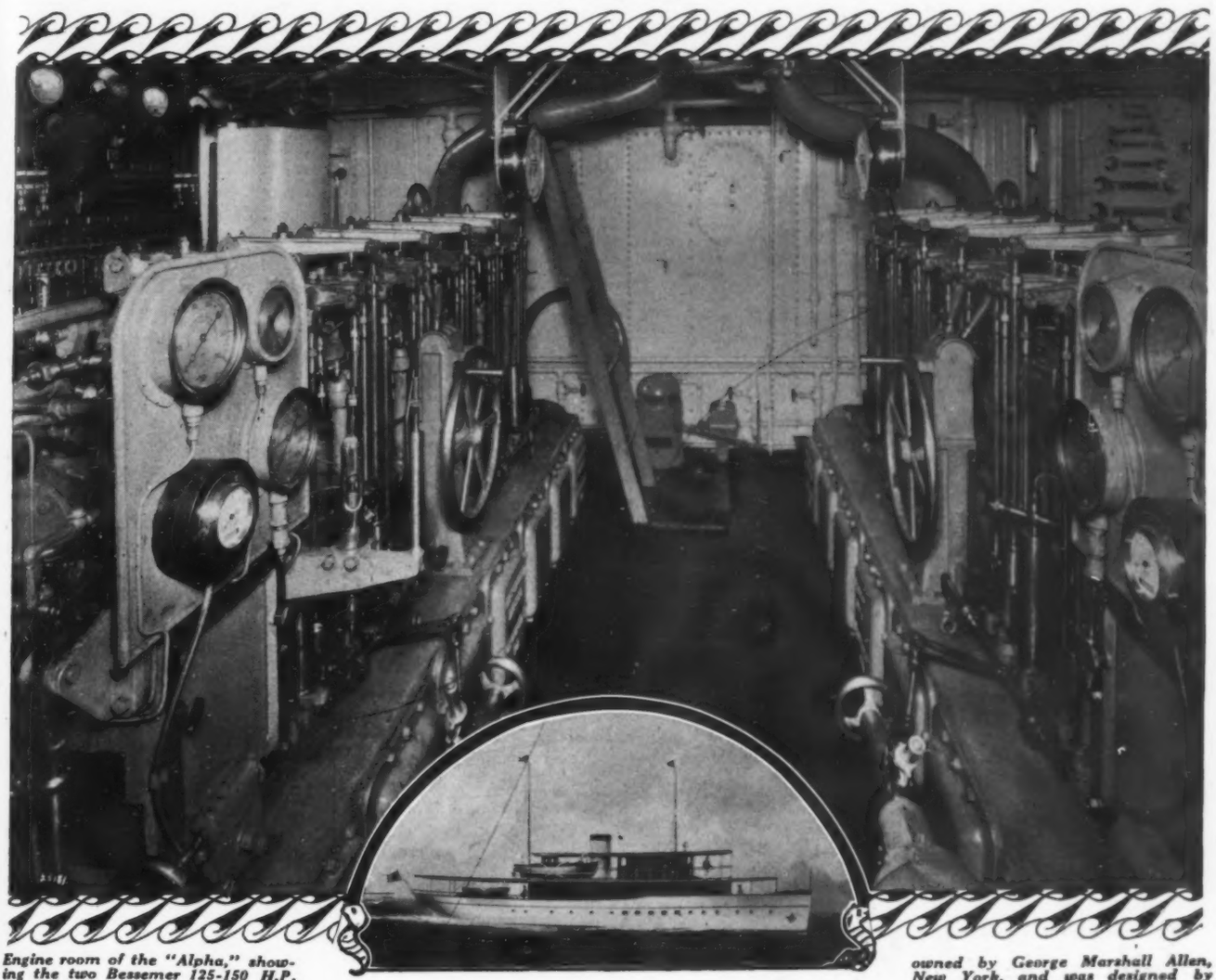
Our potatoes were a great success. We started with 170 pounds of them, stowed in a dark, dry locker. We used them every day and I have just been looking at about 10 pounds that are still with us. They have grown sprouts six inches long and look a little tired and wrinkled, but they are still good. One large crate of onions lasted us nearly to Montauk. We kept them in a dry place on deck. They persisted in growing, but otherwise they behaved. One crate would be more than enough for any ordinary crew on any ordinary passage; but we ran out of them because of the length of our passage and also because onions are the favorite fruit of four of this ship's crew. One crate of oranges, lost in the fore peak at first, and thereafter carefully tended, lasted for 35 days.

We bought 200 pounds of salt beef from a Falmouth butcher who stowed it for us in large earthernware jars packed with dry salt. On April 23rd, we found that the balance of our beef, some 150 pounds, was going bad and on the next day we had to throw it all overboard. We had experienced very little hot weather up to that time and I can only suppose there was too much bone in the meat or that the dry salt was a mistake and that we ought to have used brine.

On our homeward passage we are going to carry a great deal more canned meat and very little salt. Salt meat shrinks, gets tough, and is liable to rot; but you know where you are with the canned variety. We provided a pound of meat per man per day, but this was far too liberal an allowance, and in the end we found that a 1½ pound can was almost sufficient for the five of us. Our bacon was packed in salt like the beef, and it lasted well. We took 60 pounds, but we could have done with a little more of it.

We started with 240 eggs and all but three were eaten by May 2nd. Of these three, one was a bad one, and the other two we kept under observation until May 24th, when we ate them for breakfast. They were quite fresh although they had been laid some 52 days before. We achieved this result by (1) getting really fresh eggs, (2) coating them thoroughly with lard, (3) packing them carefully in fine, dry salt inside a large glass jar. Our butter was also packed in jars in salt. We started with 30 pounds and this kept fresh and lasted until May 20th, when we opened our first tin. Of flour we had 240 pounds when we sailed and nearly 100 pounds left on arrival. Our total consumption of water was exactly 4.73 gallons per day, and we did not stint ourselves, except for washing, for which purpose we did not consume more than about 4 pints per day.

I think that is enough about food. But before I finish



Engine room of the "Alpha," showing the two Bessemer 125-150 H.P. Diesel engines, which comprise the main power plant. The "Alpha" is owned by George Marshall Allen, New York, and was designed by Henry J. Gielow, Inc.

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with the subject I want to advise all yachtsmen who propose to make an ocean passage to take plenty of dried fruit with them — especially prunes.

During the whole passage we worked the ship watch and watch, with Martin and Briggs in one watch and Warneford and I in the other. Green's job was to cook, keep things shipshape below, trim the lamps and lend a hand on deck on critical occasions, so that he had all day on and all night in. The whole arrangement worked well; but it was not easy to secure a full allowance of sleep out of the 24 hours. Three and a half hours at the most was generally the longest spell of unbroken sleep one could hope for, and if the weather was bad, making it necessary to call all hands, I for one felt the lack of sleep severely. After 30 days of this sort of thing I would have given a great deal for one long sleep of 8 hours or so; but after that I must have become hardened, and I remember on the last day of our passage I stayed on deck all night and enjoyed the feeling that the land was all around me while I watched the lights of the steamers streaming up the Sound. If I felt the need of sleep my shipmates should have felt it more, because, besides keeping a watch as I did, Martin, as captain, was always up and about in his watch below, and Warneford never let rest interfere with his duties as navigator. One extra hand on board would have been very welcome, to me at any rate, and I am sure that the additional opportunity for sleep which we should then have secured would have been good for all of us. Five men and a cook is, I consider, the ideal crew for a long passage on a boat of this size.

Clothes were a problem. I thought I had brought more clothes than would be necessary; but I ran out of shirts and underclothes in 40 days, and when we sighted land I was showing through the seat of my fifth pair of trousers. We failed to collect enough rain and I was reduced to trying to wash my things in salt water.

And now, having got thus far, I find there are a thousand other facts and figures about which I know I ought to tell you before I can come to what I think is the interesting part of this story. I want to tell you what it all looked and felt like; of a sunrise, for instance, that I still think was well worth sailing 5,000 miles to see; of the colors of the deep waters and the queer things that swim in it; of flying fish that tried to punch holes in our mainsail; the scent of land 200 miles away; the blissful peace which enfolds you when you sail away clean out of the earth and all its troubles; the —

But there is nothing else for it. I shall have to run over into another article.

(*To be continued*)

Faith, an Offshore Cruising Ketch

(*Continued from page 69*)

her sail at a moderate angle of heel; that would not lie down and bob to every puff of breeze; with good freeboard and short, powerful ends; a vessel for *ocean* sailing, which means going down the trades, which means a good running boat first of all, even if one has to sacrifice his chances along the coast in light windward weather. Further, heavy construction, and sails and rigging able to stand punishment, were required. Then the rig must be such as, though of good area, could be easily handled by a small crew, and so well balanced under any combination as to need little reefing.

"Several other qualities were called for, but at this point I realized that what the owner was asking for was simply a hundred-foot *Spray*. And that is practically what I gave him. *Faith* is narrow and deep as compared with Slocum's boat; in fact she is of quite conventional proportions for a hundred-footer, but nevertheless the similarity of form is there, and careful calculation shows that *Faith* has the same fine balance of the principal effective centers on the midship section line."

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Don't let carelessness or a false feeling of security give dangerous pyorrhea a chance to fasten itself in your mouth. Four out of five have this dread infection at forty, and many younger, according to dental statistics.

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The entire family should brush with Forhan's. It's a pleasant tasting dentifrice that firms the gums and keeps them pink and healthy. It gives the teeth a thorough cleansing and keeps them white and clean.

You can't begin using Forhan's too soon. Delay may exact a heavy toll. It's unwise to take chances with pyorrhea. Get your tube of Forhan's today. All druggists: 35c and 60c in tubes.

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MORE THAN A TOOTH PASTE · · *IT CHECKS PYORRHEA*

Henry Howard, Organizer

(*Continued from page 55*)

tional racing — would make a book. It is not my purpose to review those races here, nor those that followed them; but in thinking today of the international six-meter races, which have greatly enriched American yachting, we should not forget that it was Henry Howard, single-handed, who set such events as these on foot.

While it was never my good fortune to make a long cruise with Henry Howard, I saw enough of him as a yachtsman to show me that his thoroughness extended to every branch of the sport which he took up. He was a master of the theory and practice of navigation, familiar with all the methods, and a writer on the subject. He knew perfectly how to handle any type of sailing boat, and he was never happier than when off for a week-end on his yacht. He had a habit of sending his boat to some port he wanted to reach, and joining her there, for a return voyage, this being a method of making the most of his limited time for sport, for he was one of the busiest men I knew, and one of the hardest workers I ever saw. He played just as hard as he worked, and thought nothing of taking a rail journey of a thousand miles for the sake of a week-end aboard his boat.

These attributes are mentioned particularly here because of their effect in one of the outstanding chapters of Mr. Howard's career, in which it was my good fortune to share in his activities in an intimate degree. This was his work for the Merchant Marine in the World War.

One morning in April, 1917, shortly after the United States entered the war, my employer telephoned me. His message was: "Henry Howard has some scheme for training officers for the merchant service, and wants you to help him. Better go see him."

I sought him out forthwith, and found him abed, at his home in Brookline, convalescing from a throat affection. He was eager to do his bit in the war, and while laid up had developed a plan that had been in his mind for some time, for training merchant officers. At first he had thought of taking a few seamen at a time on his yacht, and teaching them the art of navigation. As he turned the plan over, it grew. He now had the thought well developed of starting schools, in various parts of the country, to accomplish his desired end. The country had embarked on a program of building a thousand vessels to meet England's cry for "ships and more ships" with which to bridge the Atlantic. Mr.

Howard foresaw that the demand for officers would become acute long before all these ships were finished, unless some plan for intensive training of available raw material was adopted promptly. He had not presented his plan to the U. S. Shipping Board — then but recently formed — and wanted first to test its soundness by putting it before the public through the press. He had an exact understanding of the power of publicity, and knew that if his idea was endorsed by the people it would be accepted at Washington. He felt that the kind of men he wanted to reach could be found through the newspapers. New England ports were full of them — sailors and engineers and lads with a love of the sea. With a good handful of applications for training in hand, the rest would be plain sailing.

I left Mr. Howard thrilled with the possibilities of the idea he had put before me, and made the necessary publicity spread. The response was instantaneous. Within a fortnight Mr. Howard had brought into being the Recruiting Service of the United States Shipping Board, vested with power to train the necessary officers for the new ships, with himself as its Director. Business was started in a vacant floor of the Custom House tower at Boston, which I found furnished with an ancient flattopped desk and a rickety chair. In a few days we had a class in navigation going at Harvard, and an engineers' class at the Massachusetts Institute of Technology. In another week we had classes at other points on the New England coast, and were reaching out to establish classes along the South Atlantic and Gulf seaboards, and on the Great Lakes. In two months the chain had been extended to the Pacific Coast.

All this is easy in the telling, after nine years; but it came about only through the indomitable energy and intensive application of Henry Howard. He had a way of drawing to him the kind of men he wanted for the work to be done, drafting them from among his acquaintances in yachting, in business and in social life at Boston, New York and other cities. He called on his friends to volunteer, as he had done. Before peace put a period to his work, he had trained more than 15,000 officers, and 32,000 men. Anyone who meets Mr. Howard today is not likely to hear from him anything about this subject. He is not strong at talking about himself. But if you want to know anything about the *Alice*, he will take an hour of his time, if needful, to give you the information you desire. Wherein, it seems to me, lies a certain measure of character.

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